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Problems of Wool Cooperatives in USING FUTURES MARKETS

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The Farmer Cooperative Service conducts research studies and service activities of assistance to farmers in connection with cooperatives engaged in marketing farm products, purchasing farm supplies, and supplying business services. The work of the Service relates to problems of management, organization, policies, financing, merchandising, quality, costs, efficiency, and membership.

The Service publishes the results of the studies; confers and advises with officials of farmers' cooperatives; and works with educational agencies, cooperatives, and others in the dissemination of information relating to cooperative principles and practices.

FOREWORD

Key employees and directors of wool marketing cooperatives have expressed interest in the possibilities of increasing the effectiveness of their marketing operations by trading in futures. This report is an attempt to briefly present the theory, history, and problems of trading in wool and top futures as a service to these associations and others interested in wool marketing. It is hoped that this material will be helpful to wool cooperatives in deciding whether or not to trade in futures, and if so, on what basis. No attempt was made in this study to determine whether futures markets have been beneficial or detrimental to the interests of wool growers.

SUMMARY AND CONCLUSIONS

Important problems face wool cooperatives in employing futures as a marketing aid. In periods in the past, wool cooperatives could have traded in futures with beneficial results for grower members. At times, trading in futures could also have been costly to wool cooperatives and their grower members. Along the marketing road ahead, opportunities for using futures to advantage will develop for wool cooperatives, along with dangers of loss from trading in futures.

Futures markets are a tool or device that may be used by wool cooperatives, under certain conditions, in operations briefly described in the following paragraphs. Each of the various types of transactions requires a degree of prediction as to whether actual wool prices will rise or fall relative to futures prices - and when. The differences between actual wool prices and the prices of futures contracts do not remain constant on a grade-by-grade basis. These differences, called bases, should be of utmost concern to wool cooperatives, if and when they trade in futures.

Short hedging low-advance consigned wool. - This may be done before, during or after shearing. Futures equalling the volume of the consigned wool are sold when the price level is considered favorable. The futures are bought back when the actual wool is sold. It would be desirable for the price of wool to be low relative to the price of futures when the short hedge is first placed -- and the sales price of the wool should be high relative to the price of the futures when they are bought back. It would probably be better to sell the wool and not hedge if actual wool prices are high in relation to futures, providing the market price itself is satisfactory.

Short hedging high guaranteed-advance pool wool or purchased wool. The mechanics and guides are much the same as in the case of low-advance consigned wool. However, the cooperative itself will have to carry the price risk on purchased or high guaranteed advance wools if it does not short-hedge these wools. The cooperative will, in any event, have to carry the basis risk on short-hedged wool. The basis risk is due to the non-parallel movements of the prices of actual wool and of futures.

Long hedging forward sales for which the required wools must be obtained. The cooperative buys futures equalling the volume called for in the forward sales contract and then sells these futures when the required wool is obtained. It would be desirable for the forward sale to be made at prices that are high in relation to futures - and the price of wool should be low in relation to the price of futures when the futures are sold.

Shifting a grower's long position in consigned wool to a long-speculative position in futures. The cooperative sells the consigned wool and buys futures. The futures are sold at some later date. It would be desirable for the price of wool to be high in relation to the price of futures when the actual wool is sold and the futures bought - and there should be good indications that futures prices will rise further and/or further and faster than the prices of actual wool.

Short or long speculating for the grower's account as a futures commission agent or broker. This type of operation on the part of the cooperative would require a membership as a futures commission agent or broker in the Wool Associates of the New York Cotton Exchange -- the only wool and wool top futures market in the United States. This kind of operation would be strictly incidental to the main purpose of a cooperative wool marketing association.

Selling "on call". Essentially in an "on call" sale, the cooperative sells wool to a customer with the ultimate price to be determined at a specified amount above or below the price of a designated futures option when the customer calls the sale. The cooperative may short-hedge the wool when the call sale contract is first made, and thus then determine the gross price for the wool. The cost of the wool to the call customer is equal to the price of the future when he calls the sale plus or minus the difference agreed upon.

Purchasing wool from growers "on-call" or obtaining wool from growers in a high guaranteed-advance pool in "on-call" transactions with the grower having the right to call the sale. The cooperative agrees to purchase or give a high guaranteed advance at a designated amount above or below a specified futures option when the grower "calls". Returns to the grower will equal the price of the specified futures operation when he "calls", plus or minus the difference (basis) agreed upon when the call purchase contract was initially made. The cooperative should short-hedge wool obtained in these "on-call" transactions with growers unless it wants to bear the price risk. The grower, in essence, must want to speculate if he delivers wool to his cooperative in accordance with an "on-call" purchase contract.

Wool cooperatives have made practically no use of futures markets in the past. If they are considering trading in futures, managers and key employees of State regional and national wool cooperatives should conduct critical studies of the problems involved. If they do decide to trade in futures, they should adopt a policy of caution. These co-ops will also have to employ highly qualified personnel to do their futures trading or they will have to gather a considerable amount of knowledge through study, training, and experience in order to make sound decisions.

Selecting the month in which to place a hedge is important for the hedger. Sufficient reserves should be kept on hand to cover losses even though management decides to take only those risks in basis that are thought to be highly favorable. The pooling of any basis gains made on high-advance pool wools, and retention of these funds on a revolving-fund basis would be desirable.

Futures trading done in connection with low nonguaranteed-advance consigned wool, except for large clips, could best be done on a pool basis.

Sales management should have authority to act quickly and independently on wools involved, or to be involved, in futures transactions.

PROBLEMS OF WOOL COOPERATIVES IN USING FUTURES MARKETS

The job of a wool cooperative is to render effective and efficient marketing services for growers. The cooperative must analyze many problems in order to render progressively better services. These problems are not only those of the cooperative as such, but also those of the growers. Among the major problems are those of risks that result from price fluctuations. Cooperatives can deal with these price risks, to an extent, through such procedures as pooling, orderly marketing, and forward selling (selling wool they have not yet obtained).

Cooperatives can also use futures markets, under some conditions, in dealing with price risks. These markets are essentially auctions where you sell or buy futures -- that is, contracts for a certain amount of a commodity for delivery at some future date. The only wool and wool top futures market in the United States is the Wool Associates of the New York Cotton Exchange, Inc., New York City.

Futures markets are of more potential importance to wool cooperatives under a free and competitive market than under a flat-floor Government support program.

The grower must inevitably carry the price risk on his wool for longer or shorter periods and may therefore be considered to be a speculator, at least in the broadest meaning of the word. One of the cooperative's many functions is to provide information and services to grower members so that they can do a more intelligent job of carrying, minimizing, or unburdening themselves of the price risks on their wool.

The cooperative can help the grower carry the price risk by: (1) Offering a straight storage service; (2) handling the wool on consignment for sale at some later date on a hoped-for more favorable market; (3) selling the wool for the grower and buying futures contracts for the members' account when it is believed that the chances are good for futures prices rising relatively more than the prices of actual wool -- in other words, carrying the price risk in futures rather than in actual wool.

The cooperative can minimize a grower's price risk on consigned wool by selling futures to obtain a measure of protection against losses from severe price declines. However, selling futures for the grower to minimize his price risk precludes the grower from any large gains that might be had if prices should rise.

The cooperative can eliminate the grower's price risk on wool simply by selling it for the grower if it is being handled on consignment. The consigned wool may be sold either before or after shearing -- on a grease weight or clean-weight basis, on a grade-by-grade basis, or the entire lot as such. The cooperative can also eliminate the grower's price risk by buying the wool from him.

Wool cooperatives have handled most of their volume on consignment. Although the grower consignors have borne the price risks on these consigned wools, the cooperatives have made some advance loans on consigned wool that have turned out to be uncollectible overadvances after price declines. Cooperatives may sometimes use futures market prices as a guide for determining a safe level for making commodity advances. A cooperative may also sometimes sell futures as a hedge to prevent its advances from becoming overadvances.

Cooperatives have taken a price risk on purchased but unsold wool, or by making high guaranteed advances on the wool. They have made most of the purchases to fill specific forward sales. However, it is practically impossible to match the volume of purchases with the volume of forward sales on a grade-by-grade basis. A cooperative can minimize its price risk on purchased but unsold wool by short hedging in the futures market. A short hedger sells futures when he buys wool. Then when he sells the wool, he buys back futures.

A cooperative also bears the price risk on forward sold but unpurchased wool. It is impossible to exactly match the time of making a forward sale and the time of purchasing the required wool. A cooperative can minimize its price risk on forward sold but unpurchased wool by long hedging in the futures market. A long hedger sells wool he does not have and buys futures. When he buys the wool, he sells the futures.

Wool cooperatives can obtain a measure of credit protection by selling wool "on call" to manufacturers, and short hedging the wool in the futures market. Selling "on call" means selling the basis (the difference between the actual wool price and the price of the futures) at a specified amount above or below that of a designated future.

Use of futures by cooperative wool marketing associations may appear to be relatively simple on the surface. The mechanics of short hedging, for example, are quite simple but the problems in deciding when and how to hedge require sound and keen judgment based on knowledge of a whole host of factors. Some of these factors are presented briefly in this report.

ACTUAL AND FUTURES MARKETS

A futures contract is an agreement wherein one agrees to sell, or agrees to buy a stipulated amount of a given commodity for delivery during a specified future period of time. Brokers execute futures contracts for the traders in accordance with rules and regulations of an organized exchange or board of trade. The seller and buyer are unknown, one to the other. The owner of a contract may cancel out his futures position simply by having his broker sell the contract. A futures market is essentially an auction at which futures contracts are traded.

The owner of a "sell" contract is "short". The owner of a "buy" contract is "long". A short loses if the price of the future rises between the time he takes the short position in the market and the time when he cancels ("covers" in the case of a short) that position. If futures go down the short profits on the futures market. A long profits when futures go up and he "liquidates"; loses when futures go down.

A "long" speculator "buys" futures with the hope that the price of his contract will rise. He buys December wool (called the December "option"), for example, in July; and "liquidates" his "long" position in say October. If December wool is higher when he liquidates he will realize a profit; if lower he will lose. Long speculators seldom take delivery on wool called for in futures contracts but liquidate their futures instead.

A "short" speculator "sells" futures with the hope of later "covering" his position with a profit. He profits when futures prices go down; loses when they go up.

A "straddler" or "spreader" is a speculator who simultaneously "buys" one future or "option" and "sells" another future or option with the hope of later being able to simultaneously liquidate and cover his equal and opposite positions with a profit. 1/

Straddlers or spreaders may "straddle" or "spread" different futures or options in the same exchange, between different exchanges, or even different commodities. They may, for example, straddle May and October wool, December wool and March wool tops, or March New York wool and May London wool tops.

"Scalpers" are speculators who attempt to profit through short-term fluctuations in futures prices. They usually wind up a day's operations without a net long or short position.

"Hedgers" trade in futures for an entirely different purpose from that of the speculators. Hedging operations are carried out with the idea in mind of obtaining protection against loss from future price changes. Hedgers operate in both the spot or actuals (that is, buying and selling the wool itself) and the futures markets.

Hedging is a procedure for obtaining a measure of protection against losses from price changes in actual commodity by taking equal and opposite positions in "actuals" and futures. The idea is that losses in actuals should be offset, at least in part, by gains in futures. Hedgers expect gains in actuals to be offset, at least in part, by losses in futures.

1/ If a straddler believed that October wool was low relative to December wool, he would buy October and sell December. If he guessed right and the spread changed as predicted, he would sell October and simultaneously buy December. The following illustrates a 2-cent gross profit in spread before paying brokerage fees:

Date	Action			
August 20	Buy October @	$1.50 per pound	and sell December @	$1.48 per pound
August 25	Sell October @	$1.60 per pound	and buy December @	$1.56 per pound
	Profit	$0.10	Loss	$0.08

There are two types of hedgers (1) short hedgers, and (2) long hedgers.

The short hedger owns, or is about to buy, a commodity on which he wants to minimize the price-risk. He therefore sells futures in quantity matching as nearly as possible that of the actual commodity. When the short hedger sells the actual commodity, he covers (buys back) his futures. 2/ However, if the commodity is deliverable according to grade and volume, he may fulfill his futures obligations by delivering in accordance with the rules of the exchange. Short hedgers seldom deliver the actual physical commodity but cover their futures instead.

A long hedger may be a middleman (but not a grower unless he also is a dealer) who has forward sold, at a fixed price, a commodity which he does not yet own, and has "bought" futures (taken a long position in futures) to obtain protection against losses that he may sustain if prices of the actual commodity should rise before he purchases the commodity called for in his forward sales contract. When the long hedger purchases the required commodity he liquidates his long futures position. 3/ Long hedgers seldom take delivery in fulfilment of their futures contracts.

If a grower should buy futures when he sells his wool, he would simply be switching from a long position in actual wool to a long speculative position in futures.

It is important for hedgers to understand the relationships of prices of futures and the prices of actuals. By a like token it is quite important that the owner of a commodity understand these relationships if he anticipates selling actuals and shifting to a long speculative position in futures. The relationship of spot or actual prices to futures prices is measured in terms of basis.

The "basis" is the difference between the price of a given futures option and the price for the actual commodity. The basis is "on" when the price of the actual commodity is higher than the price of the future. The basis is "off" when the actual price is lower than the price of the future. The basis can be reckoned for each quality or lot of commodity for each future or option.

2/ Following is a simplified example of a short hedge.

Date	Actions	
May 10	Buy wool @ $1.50	and sell October futures @ $1.40
Dec. 5	Sell wool @ $1.60	and buy October futures @ $1.50
	Profit on spots - $0.10	Loss on futures - $0.10

3/ Following is a simplified example of a long hedge.

Date	Actions	
March 5	Forward sell wool for April delivery @ $1.40	and buy July wool futures @ $1.45
March 21	Buy required wool @ $1.45	and sell July wool futures @ $1.50
	Loss on actuals - @ $0.05	Profit on futures $0.05

Basis usually does not fluctuate as much as do spot prices in broad price movements. In other words, spot and futures prices tend to go up and down together especially in the larger price fluctuations. However, spots and futures do not move up and down together in perfect correlation. The hedger, therefore, takes on a time risk in basis. The hedger is primarily concerned with fluctuations in basis and, therefore, in basis risk. He is only secondarily concerned with price changes for the actual commodity.

The basis is "high" when the actual price is high in relation to the price of a given future. The basis is "low" when the actual price is low in relation to the price of a given future. A high basis is a favorable selling basis. A low basis is a favorable buying basis.

When the basis is high, or predicted to go lower, the hedger considers it a favorable time for selling wool. The long hedger sells forward on wool he does not yet own and buys futures - then sells the futures when he buys the required wool. The short hedger sells the wool and covers (buys back) the futures that he sold when he originally bought the wool. Large wool growers who want to maintain a long position might find it profitable to shift from a long position in wool to a long position in futures by selling wool and buying futures when the basis is high. "On-call" sales, whereby the basis is sold, are considered good business when the basis is high.

When the basis is low, or predicted to go higher, it is then considered a favorable time for the hedger to buy wool. The long hedger buys the required wool and liquidates his futures. The short hedger buys wool and sells futures. The hedging wool grower sells futures and keeps his wool for sale at a later date. "on-call" purchases are considered good business when the basis is low.

The problems of hedging, or shifting from a speculative position in actuals to a speculative position in futures, are largely those of predicting changes in basis. Basis risks are not likely to be as great as price risks. However, basis risks are all important to the hedger. No sure-fire formula has been, or is likely to be developed for predicting changes in basis. Good judgment based on experience and factual knowledge is required for predicting changes in basis. Predicting changes in basis constitutes the heart of hedging operations. The hedger's selling basis must be higher than his buying basis plus all costs and taxes of doing business, if he is to realize an income. The hedger can hedge only that portion of his wool that is offset in volume by futures contracts -- he is speculating on the difference in volume between that specified in his futures contracts and in actual commodity or forward sales.

There never will be a "perfect" futures market for hedging wool; that is, one in which there would be no basis risks because of spots and futures moving up and down together in perfect correlation. Perfect hedging in futures never will exist because prices of different grades of wool do not, and will not move up and down together in perfect correlation, and because of imperfect competition.

In a "broad" futures market there are many financially able traders of all classifications - long speculators, short speculators, straddlers, scalpers, long hedgers and short hedgers. In a "thin" futures market there is less buying and selling strength or competition among the traders.

A broad futures market is able to quickly absorb heavy sell and/or buy orders with minimum effect on prices. Heavy sell orders are likely to severely depress prices in a thin market while heavy buy orders are likely to unduly raise futures prices. The breadth of a futures market changes from time to time.

The right of traders in futures contracts to deliver, or demand delivery, is the prime force tending to keep spot and futures prices in alignment. However, there are also forces that tend to keep these prices from moving up and down together.

If all wool were of the same grade and quality we would probably find little difference between the prices of spots and nearby or current futures. However, there are numerous grades and qualities of wool for which prices do not move up and down together in perfect correlation. The seller in a futures contract can deliver any grade or quality that is equal to or better than minimum specifications of the exchange. The exchange specifies premiums and discounts, as appraised by exchange appraisers, for the various grades and qualities. These standard premiums and discounts are not always in alignment with spot market prices. There is thus a strong tendency for the seller in a futures contract to deliver the cheapest deliverable grade - premiums and discounts considered.

The buyer in a futures contract does not know what grade or quality of wool will be delivered to him when and if he holds his contract until a transferable notice is passed to him. There is, therefore, a strong tendency for long hedgers to liquidate their futures before they receive transferable notices. The transferable notice probably would not fit the requirements set forth in the long hedgers' forward sales.

Short hedgers usually find it more profitable to sell their hedged wool in the spot market and cover their futures than to make delivery. Long hedgers usually must depend on the spot market for obtaining the wool required in their forward sales.

Speculating wool dealers or manufacturers are most likely to take delivery. Speculators from outside the wool trade are not likely to take delivery. However, it is possible for the longs in a futures market to maintain their position long enough to "squeeze" the short speculators and short hedgers into either covering their futures or making delivery. "Squeezes" are characterized by rising futures prices - sometimes making it profitable for a short hedger to make delivery. If a squeeze really gets serious; that is, forcing prices of both spots and futures above a level justified by supply and demand, it is then known as a "corner". Squeezing and cornering are really difficult and risky operations. Concerted and strong efforts on the part of shorts in issuing transferable notices (notices of intent to deliver) are likely to depress futures prices. All in all, from the standpoint of the hedger, it is desirable to have a broad futures market.

Futures prices cannot long stay above spot prices by an amount greater than carrying charges plus brokerage and delivery fees, because one would simply have to buy deliverable grades of wool, simultaneously sell futures, and later make delivery to assure himself a profit.

The price of distant futures cannot long remain higher than nearby futures by an amount greater than carrying costs because the trader could then assure himself a profit by simultaneously buying nearby and selling distant futures - take delivery on the nearby - keep it in storage and then make delivery when the distant futures mature.

Distant futures within a given crop year for commodities such as cotton, corn, and wheat - with rather definite crop years - normally tend to be higher than the nearby by the amount of carrying costs. However, wool is shorn during all months in different parts of the world and offered at auction during most months. Nearby wool and wool top futures have usually been higher priced than the distant futures. A futures market is "inverted" when distant options are lower than the nearby.

WOOL ASSOCIATES OF THE NEW YORK COTTON EXCHANGE

The Wool Associates of the New York Cotton Exchange, Inc., 60 Beaver Street, New York City (hereinafter abbreviated WANYCE) operate the only wool and wool top futures market in the United States. Foreign wool top futures markets are in London, England; Antwerp, Belgium; and Roubaix-Tourcouring, France.

Trading in wool-top futures by WANYCE began on May 18, 1931, and in grease-wool futures on March 17, 1941. The function of the exchange is to provide facilities, rules and regulations, and services for trading in futures contracts. Trading in futures is by open outcry of bids and offers made by floor brokers assembled around the "wool table" on the 19th floor of the Cotton Exchange Building. The hours of trading are: grease wool from 10:10 A.M. to 2:40 P.M.; tops from 10:20 A.M. to 2:50 P.M., Mondays through Fridays, holidays excluded.

A top contract is for 5,000 pounds, net conditioned (clean basis) weight; a grease wool contract for 6,000 pounds, clean basis. Active delivery months are March, May, July, October and December. Transactions in the futures can be made for up to 18 months in the future.

The contract, par or standard [4/] for top used for trading in the futures market is a 64's top of average length and color. From this contract standard, WANYCE computes premiums and discounts depending on the quality of the tops that are certificated as eligible for delivery. For example, the Exchange allows a maximum discount of 16 percent under the price shown on the futures contract for the lowest deliverable grade (58's tops of strictly full staple length). Tops that are superior to the contract standard are allowed up to 4 percent premium over the price shown on the futures contract.

4/ See "Contract Valuations on the New York Wool Exchange", published by Wool Associates of the New York Cotton Exchange, Inc., for more exact information on specifications and methods for computing premiums and discounts charges and commissions; and for methods of certification, delivering, and receiving.

The par grade for grease wool is 64's with an average stretched length of 2.4 inches. Premiums up to 6 percent are allowed for superior wools. Discounts up to 6 percent are taken for a 60's wool of 2.5 inches, which is the lowest deliverable classification. Premiums and discounts up to 11 percent will be allowed, or taken, starting with the October 1954 contract.

The seller has the option of delivering any classification of tops or grease wool that has been appraised and certificated by WANYCE. Tops must have been combed by approved combers. All deliveries must be made from WANYCE approved warehouses in the Boston area.

Trading in top futures is subject to regulations issued by the Commodity Exchange Authority, in accordance with the Commodity Exchange Act. Trading in wool futures is not subject to these regulations.

The nonmember commission for a round turn (sale and cover, or; purchase and liquidate) is $40 per contract; member rates are $20. Nonmember straddle commission is $12; members $6.50. "Spot" service fees are charges for delivering and/or receiving in fulfillment of futures contracts at $15 per contract for each side when no taking up, handling, or financing is done by the member commission house or broker.

WANYCE issues a loose-leaf book, "By-Laws and Rules - Wool Associates of the New York Cotton Exchange, Inc." The rules are elaborate and detailed. Sales and purchases of futures contracts are made in accordance with these rules. Any person contemplating much use of futures for hedging should study and understand the pertinent provisions set forth in this manual.

Volume of Trading and Open Interest

The volume of trading is increased every time a future is traded and is an indicator of activity in futures trading. Since purchases always equal sales, only one side of the transaction is used in computing the volume of trading.

Open contracts, or open interest, are the total of all futures contracts which have been entered into and not yet offset. Short interest always equals long interest.

A trader, whether speculator or hedger, may sell and buy futures many times and maintain only a small open position. Volume of trading in wheat futures, for example, was over 20 times as great as production during the year beginning in July 1929.

Table 1 shows volume of trading, open interest and deliveries by WANYCE.

Chart 1 shows the volume of trading in futures by WANYCE for wool and tops, 1948-53. Chart 2 shows the monthly average open commitments in futures for wool and tops, 1948-53.

Table 1.- Volume of trading, open interest, and deliveries by WANYCE

Year	Volume of Trading (Yearly Total)			Open Interest (Mean of monthly averages)			Deliveries (Yearly Total)	
	Tops	Wool	Total	Tops	Wool	Total	Tops	Wool
	1,000 pounds							
1938	73,645	-	-	-	-	-	2,820	-
1939	119,880	-	-	7,770	-	-	840	-
1940	161,280	-	-	10,075	-	-	2,260	-
1941	84,985	28,188	113,173	6,025	2,868	8,893	1,835	1,548
1942	36,305	6,684	42,989	3,555	588	4,143	2,195	378
1943	36,870	2,838	39,708	3,805	312	4,117	1,445	108
1944	47,105	6,558	53,663	4,880	684	5,564	455	300
1945	38,755	13,974	52,729	5,285	2,004	7,289	120	354
1946	20,720	23,742	44,462	4,740	5,016	9,756	185	1,404
1947	24,345	34,374	58,719	4,265	4,860	9,125	1,250	1,296
1948	42,065	40,122	82,187	4,740	4,272	9,012	1,875	894
1949	48,315	36,600	84,915	4,960	3,288	8,248	750	1,092
1950	78,015	56,941	134,956	5,695	3,702	9,397	1,690	1,002
1951	119,345	194,280	313,625	8,330	11,760	20,090	2,615	2,268
1952	169,845	245,808	415,653	19,128	20,340	39,468	4,440	3,642
1953	111,365	109,374	220,739	15,328	9,366	24,694	2,975	2,658

Source: Data published by WANYCE.

It is difficult to predict how much volume of trading, open interest and deliveries there will be in the future. Much will depend on such factors as war or peace, support programs and price ceilings, international trade agreements and tariffs. There probably will be an expansion of trading volume and open interest if prices of domestic and foreign wool are allowed to fluctuate with supply and demand.

Only a small percentage of the stocks of apparel wool have been hedged. The smallest post-war stock in the United States was 123 million pounds, scoured basis as of March 1, 1951.

Violent price movements of 1950 and 1951 probably account for some of the increased activity by WANYCE during 1952.

Table 2 shows the open position of different classes of traders in top futures on WANYCE.

Table 2.- Average long and short commitments of reporting 1/ and nonreporting traders in wool top futures on WANYCE

Year Beginning July 1	Nonreporting		Reporting traders					
			Speculative		Spreading		Hedging	
	Long	Short	Long	Short	Long	Short	Long	Short
			1000 pounds					
1947	2,405	1,609	1,074	0	8	8	588	2,458
1948	3,366	2,537	1,551	277	152	152	478	2,581
1949	3,454	2,009	347	92	203	203	758	2,458
1950	5,262	3,141	44	140	66	66	600	2,625
1951	9,411	4,269	1,022	40	800	800	2,466	8,590

Based on data compiled by the Commodity Exchange Authority by semimonthly intervals and published in - "Commodity Futures Statistics."

1/ Any trader whose position in one wool top future reaches 125,000 lbs. is required to report daily all his trades and positions (long or short and speculative or hedging and/or spreading) to the Commodity Exchange Authority.

CHART 1

TRANSACTIONS IN WOOL AND WOOL TOP FUTURES

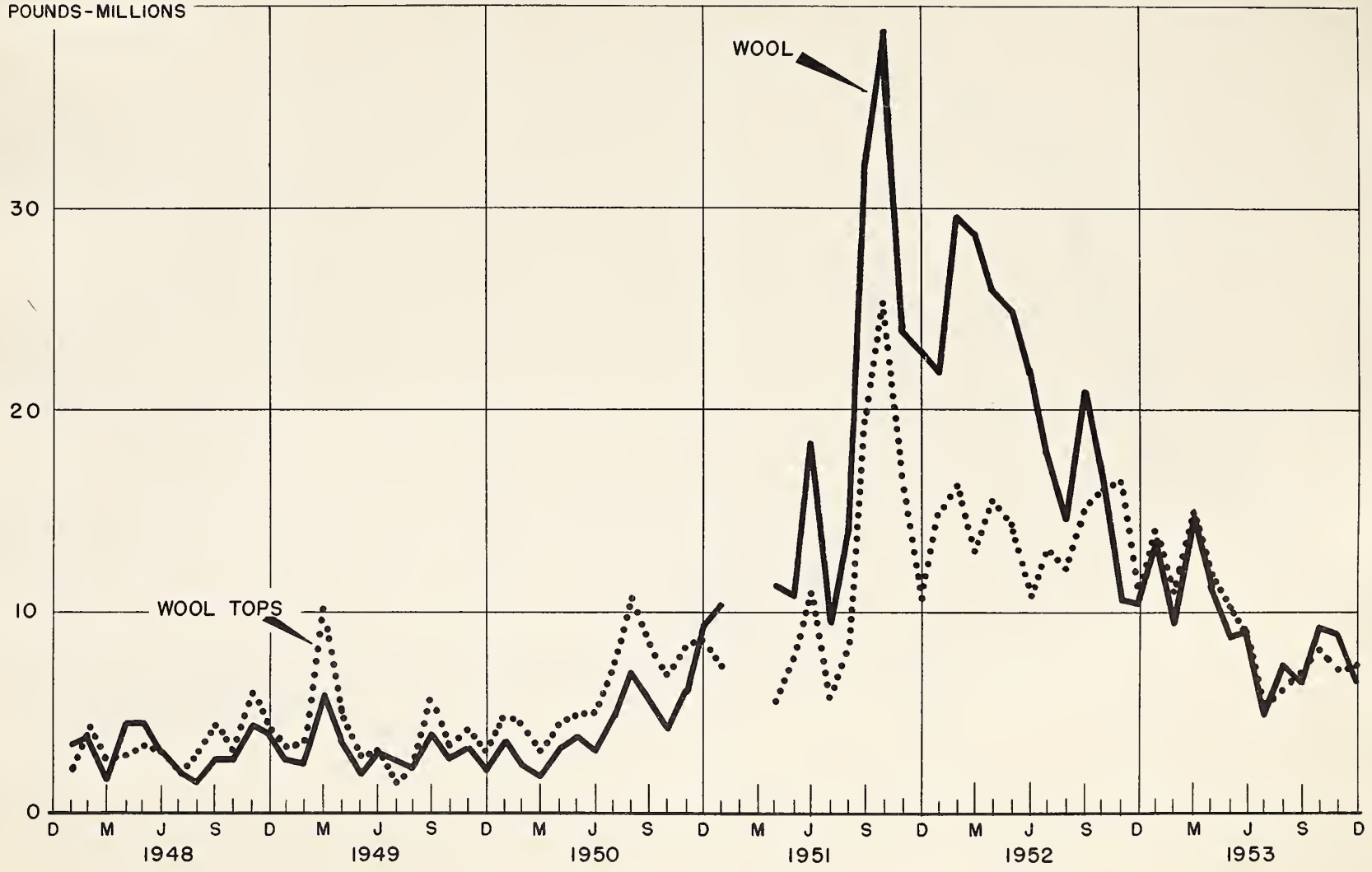


CHART 2

MONTHLY AVERAGE OPEN INTEREST IN WOOL AND WOOL TOP FUTURES

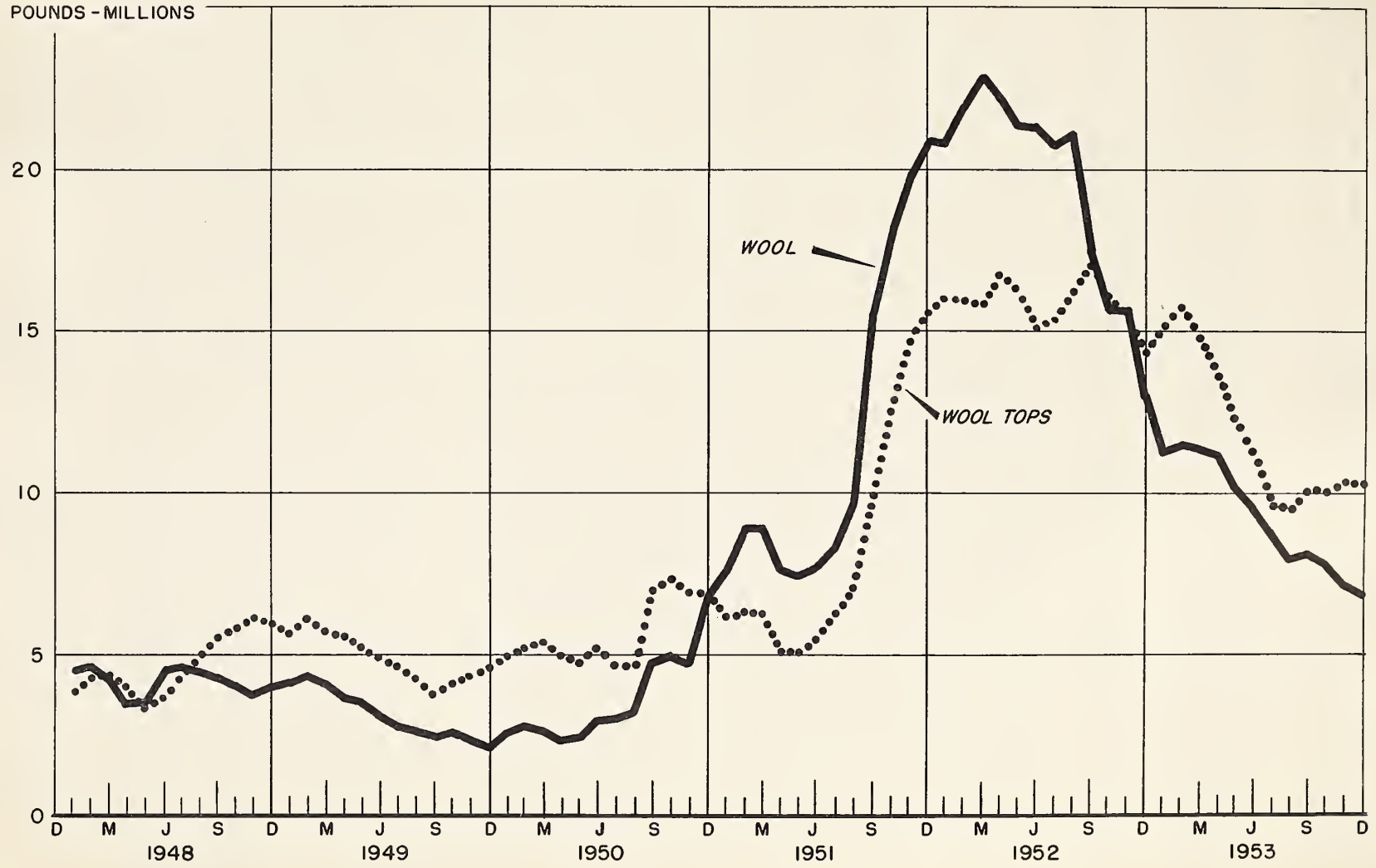


Chart 3 shows the open position of reporting traders at semimonthly intervals. There was some tendency for the reporting large long-hedging positions to move opposite to that of reporting short hedging. The period was short and the long-hedging commitments were small. It is possible that a few firms could have caused much of the variation in hedging commitments in tops.

Reporting short speculators held only small positions during the period shown in Chart 3. The rapid rise in their commitments during February and March 1949 occurred at the same time as the sharp drop in the positions of large long speculators.

Commodity Exchange Authority made the following report concerning a break in top futures prices on March 16 and 17, 1949: 5/

"In view of the abrupt break in wool-top futures prices of approximately 11 cents a pound on March 16 and 17, 1949, a special survey was made by CEA of all transactions and positions of traders in the market on those dates. The survey showed that the market had great difficulty in absorbing the liquidation of heavy speculative lines which had been built up over the preceding months by two large speculators. The hasty selling out of their positions was the principal factor in the break in prices.

The survey showed that the total number of traders in the wool-top futures market was small. As of March 16 there were only 208 traders in the market, the accounts of 144 being reported as speculative and 64 as hedging.

Total open contracts in the market on March 16 amounted to 5,885,000 pounds. The holdings of speculators were 3,375,000 pounds on the long side and 2,710,000 short, accounting for 57.2 percent and 45.9 percent, respectively, of the total long and total short commitments. The speculative interest was concentrated in a few large accounts, four large speculators holding 55.9 percent of the total speculative positions long, and two large speculators holding 41.1 percent of the total short speculative interest.

The accounts reported as hedging amounted to 2,520,000 pounds long, or 42.8 percent of total long positions; and 3,185,000 pounds short, or 54.1 percent of the total short contracts. Residents of Massachusetts and New York held the largest proportions of both speculative and hedging accounts."

It is unfortunate that complete classification data are not available to show the positions of all classes and types of traders in both top and wool futures.

5/ Report of the Administrator of the Commodity Exchange Authority - 1949 - U. S. Department of Agriculture.

CHOOSING OPTIONS

Selecting the month in which to place a hedge is important for the hedger. Factors to consider in arriving at the decision include the type of position, long or short, estimated period of time required, the prices for the different options in relation to one another and predicted changes in relationships.

Chart 4 shows that distant futures or options have almost invariably been priced lower than the nearby. (When distants are lower than nearby the market is inverted.)

The hedger may, for example, reckon relative values of the various options for a long hedge as follows: March $1.50; May $1.49; July $1.48; and October $1.47. He may place an order with his broker to buy the cheapest future that can be bought according to the foregoing relative values; that is, if the broker can buy May for $1.46 but at the same time would have to pay $1.46 for July, it would be obvious that May would be the better value.

The short hedger who buys wool in May might figure that he should be able to advantageously merchandise his wool in the spot market before December. The simplest procedure would be for him to sell December when he buys the wool and then cover his futures when he sells the spots. However, the short hedger can shift from one future to another by concurrently covering one future and selling another. The short hedger is thus also faced with the problem of reckoning which option is most favorable.

The tendency for spot wool prices to be closer to nearby than the distant futures prices makes the problem of the short hedger more difficult than if the opposite condition should prevail. This means that the short hedger must be able to purchase wool at a lower price than if distant futures were higher priced than the nearby. However, this problem is not so difficult if the short hedger has a rapid turnover of stocks and his position in both spots and futures is small.

CHANGES IN BASIS

Weekly, Monthly and Yearly Changes

Basis changes take place by the minute, hour, day, week and month. The changes may be large or small and take place rapidly or slowly. Futures prices usually show greater changes within short periods than do spot prices.

Futures prices are limited to a rise or fall of 10 cents a day by WANYCE Spot prices have no such limitations.

Imperfect knowledge, imperfect competition, and lack of alertness in both spot and futures markets are the causes for a major portion of the fluctuations in basis for at least the cheapest deliverable grades of tops and grease wools.

CHART 3

LONG AND SHORT COMMITMENTS IN WOOL TOP FUTURES BY REPORTING TRADERS

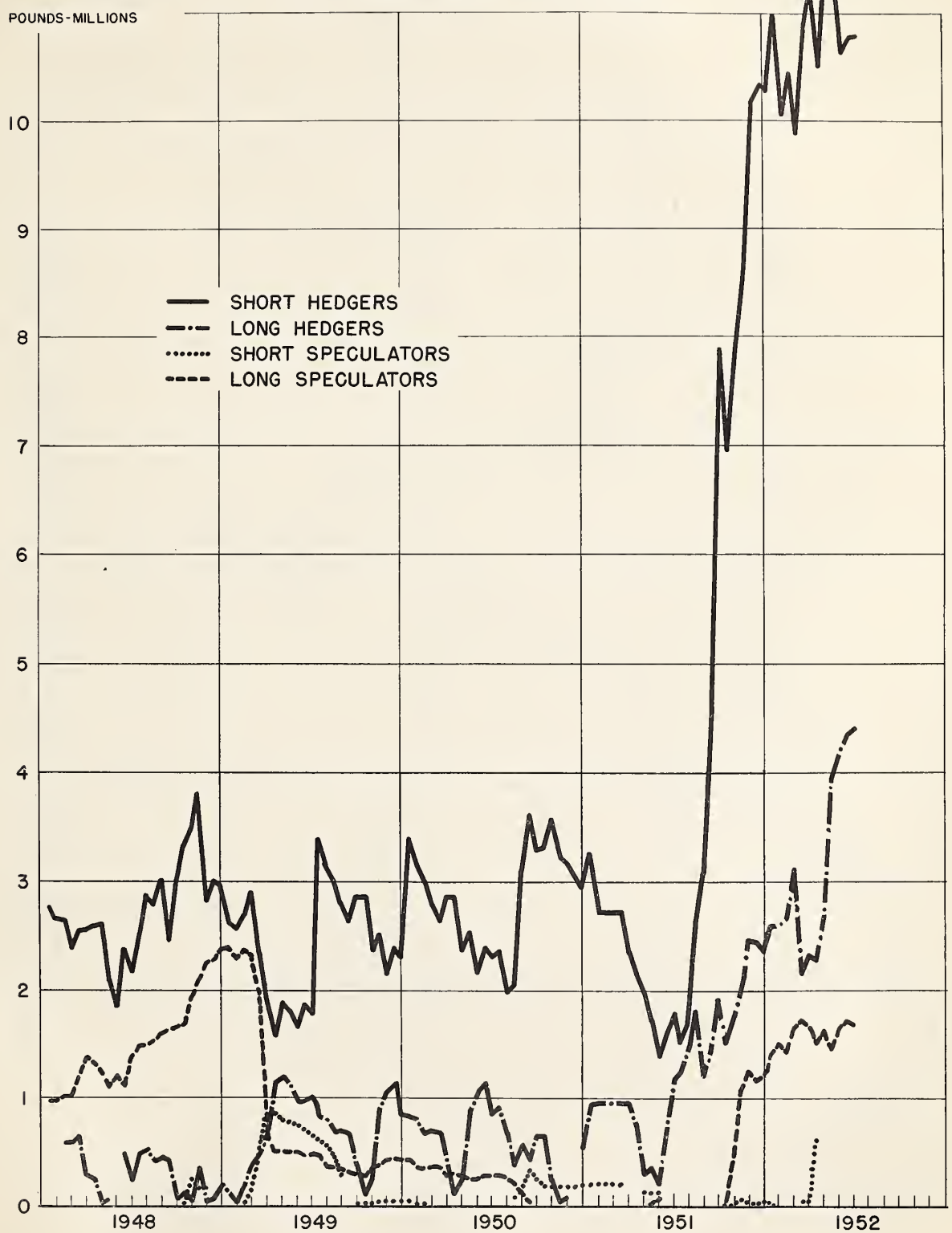
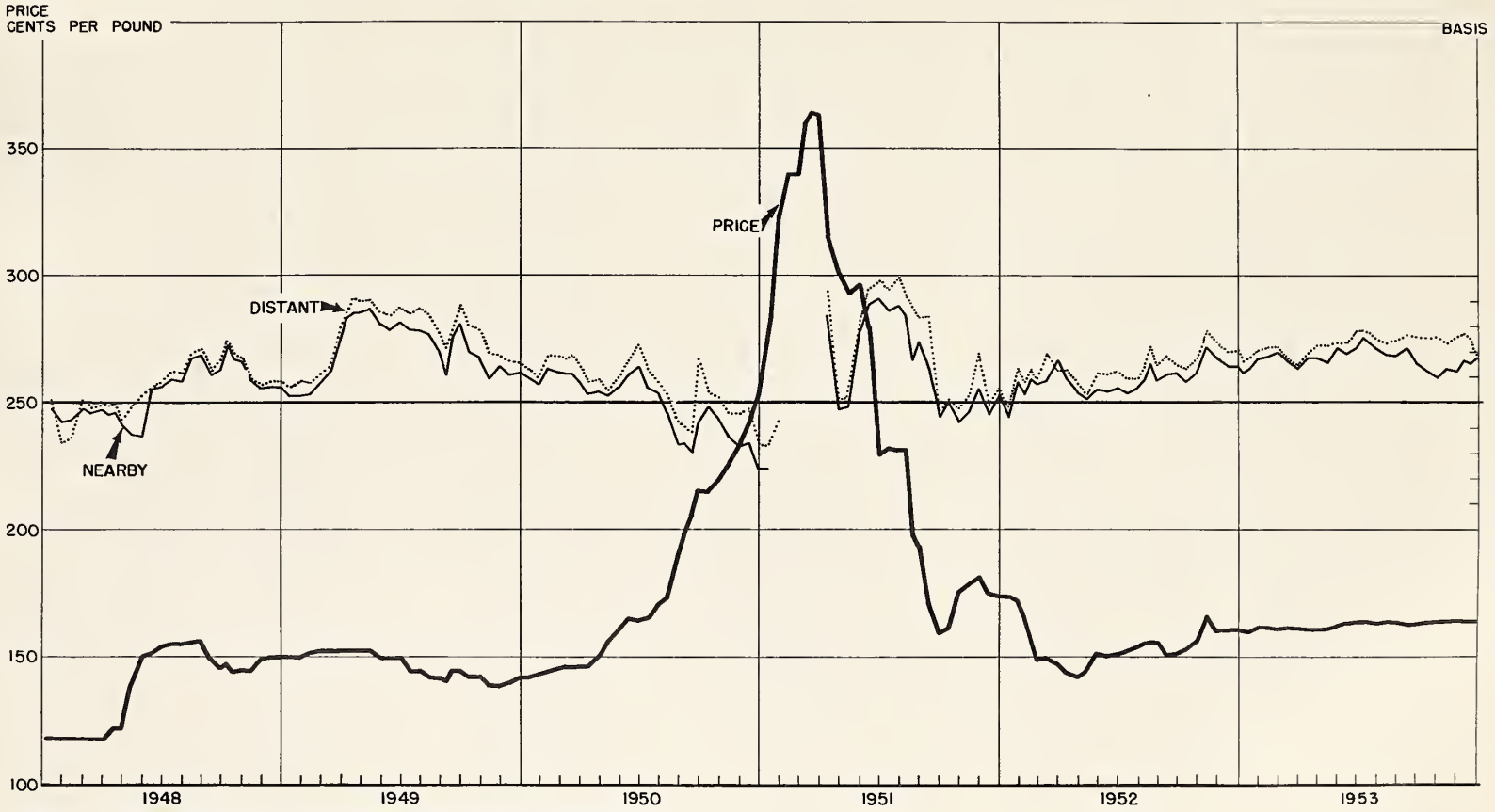


CHART 4

AVERAGE PRICE OF TEN TYPES OF FINE AND 1/2 BLOOD WOOLS AND BASES FOR NEARBY AND DISTANT FUTURES



SCHEDULE USED FOR NEARBY AND DISTANT FUTURES CONTRACTS:

DATE	NEARBY	DISTANT
FEB. 16 - APRIL 16	MAY	OCTOBER
APR. 16 - JUNE 16	JULY	DECEMBER
JUNE 16 - SEPT. 15	OCTOBER	MARCH
SEPT 16 - NOV. 15	DECEMBER	MAY
NOV. 16 - FEB. 15	MARCH	JULY

Data from Basic Data Service — WANYCE

Charts 4 to 6F trace changes in basis during 1948-53. A quick look at these charts shows that there has been a considerable amount of variation in basis. At times, basis fluctuated more than spot prices, especially when spot prices were fairly stable. Basis fluctuated with considerable violence during 1950-51 but not as much as spot prices.

The interpretation of Charts 4 to 6F can be made in only broad general terms because a group of unmeasured factors do not show their effect in these charts. An exhaustive analysis would include daily prices, by types, of both foreign and domestic wool, volume of trading in spot wool and tops, and technical conditions in the futures market. Daily spot price data have not been made available, and a high proportion of the weekly prices were reported as nominal. The futures prices used in Chart 4 are weekly averages while those in Charts 5 to 6F are weekend closing prices. All the spot price data used in these charts are based on information obtained by WANYCE for midweek periods. The time lag between spot and futures prices in Charts 5 to 6F accounts for some of the charted fluctuations. No attempt has been made to completely evaluate the accuracy of the data in Charts 4 to 6F and it is not known just what proportion of the charted changes in basis are due to lack of comparability of spot and futures prices. It is obvious, however, that there have been considerable fluctuations in the bases for different grades, and this is to be expected, even in a very broad market.

It has been pointed out that hedgers are primarily interested in basis. One must "be on top of" the price situation in both the spot and futures market in order to understand the factors that affect basis. In order to competently judge whether basis is favorable for buying, for selling, or for selling or buying on call, it is necessary to consider a host of factors that cannot be presented in a report of this type. The problem, in its essence, is to consider and predict whether the wool can be hedged without basis loss, or with a basis profit. Charts 4 to 6F are of value primarily in giving some idea of what has been a high, low, or average basis.

Commodity Credit Corporation selling prices are used in these charts for the first part of 1948 up to the sharp rise in basis. Most of the CCC spot wools were "shop worn" and some had been over-appraised. This accounts in part for the low bases shown during the first 5 months of 1948. However, it would probably have been profitable to purchase deliverable grades of CCC spot wools, sell offsetting short-distance futures (hedges) and then later in the year to sell the spots and cover the futures.

The bases fluctuated considerably more than spot prices during the last 7 months of 1948, all of 1949, and the first 3 months of 1950. The bases for most grades were at relatively high levels during much of 1949. The buying basis was favorable during January and February 1949. This means that it would have been profitable to buy spots either from inventories or on the sheep's backs, sell futures and then sell the spots during April, May and June 1949 and simultaneously cover the short hedges. The bases for 3/8 and 1/4 blood territory wools were high during all of 1949 except January and February. The CCC price support program was active during 1949 and probably helped account for the relatively high bases during much of that year. "On call" sale of spots would have been good business during the high basis periods of 1949. The shifting from a long speculative spot position to a long speculative futures position would also have been profitable during the high-basis periods of 1949.

The bases did not reach any spectacularly high levels during 1950 but did reach some extremely low levels. Spot prices started on a fantastically rapid rise after the outbreak of the Korean War in mid-1950. The prices of futures, on the average, rose faster than the prices of spots with the result that bases became very low. With the low bases prevailing during late 1950 it was more profitable to hold a long speculative position in spots than in futures. There were times during this period when a short hedger could have made very large profits simply by buying deliverable spots, selling nearby futures and then delivering on these futures.

WANYCE was closed during February and March 1951 because of confusion over Office of Price Stabilization regulations.

Bases fluctuated violently during most of 1951. Buying bases were favorable during part of April and May but soon shifted to highly favorable selling bases. However, the highly favorable selling bases shown during mid-1951 are based on nominal spot prices (prices asked by merchants but at which only very small quantities could be sold). A long speculative position in futures was more favorable than in spots during the period of high bases. Bases reached some low levels during a spurt in the spot market in the autumn of 1951.

During 1952 the bases showed relatively greater fluctuations than spot prices in a continued dull market.

Daily Fluctuations in Basis

WANYCE regulations allow the prices for a future to vary within a maximum range of 10 cents per pound per day, and the price is not allowed to rise or fall more than 10 cents above or below the closing price of the previous day.

If the WANYCE regulations had not been in effect there would undoubtedly have been days when futures prices would have risen or fallen considerably more than 10 cents per day.

The hour-by-hour and minute-by-minute fluctuations in basis are important to the hedger in placing and lifting his hedge. Heavy sell orders tend to depress while heavy buy orders tend to raise futures prices. If and when a futures market is thin, heavy sell or buy orders might not be executed even at minimum or maximum advances or declines permitted under WANYCE rules. The technical condition of the market is a subject of constant concern to the large operators in futures markets. Careful hedgers take the condition of the market into consideration when taking their opposite positions in the spot and futures market.

An exceptionally fast drop in futures prices is demonstrated by a seven-day trading period, June 18, 1951, through June 26, 1951, when October wool dropped from $2.275 to $1.695 per pound. Rises of almost equally exceptional proportions have also taken place in futures prices.

CHART 5

FINE FRENCH TERRITORY BOSTON SPOT PRICE AND BASIS FOR CURRENT OR NEARBY FUTURE

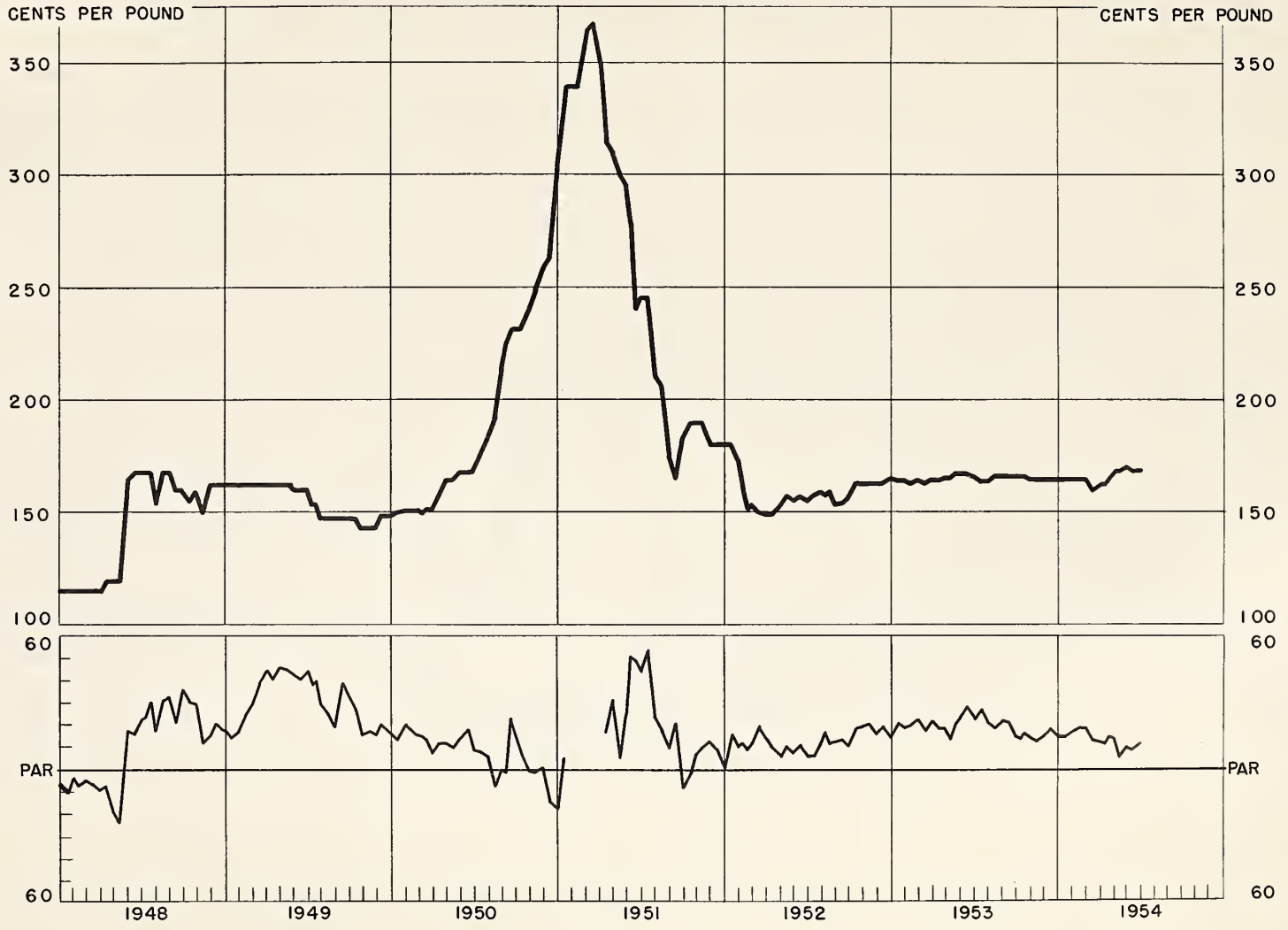


CHART 6A

BASES FOR FIVE GRADES OF TERRITORY WOOL - 1948

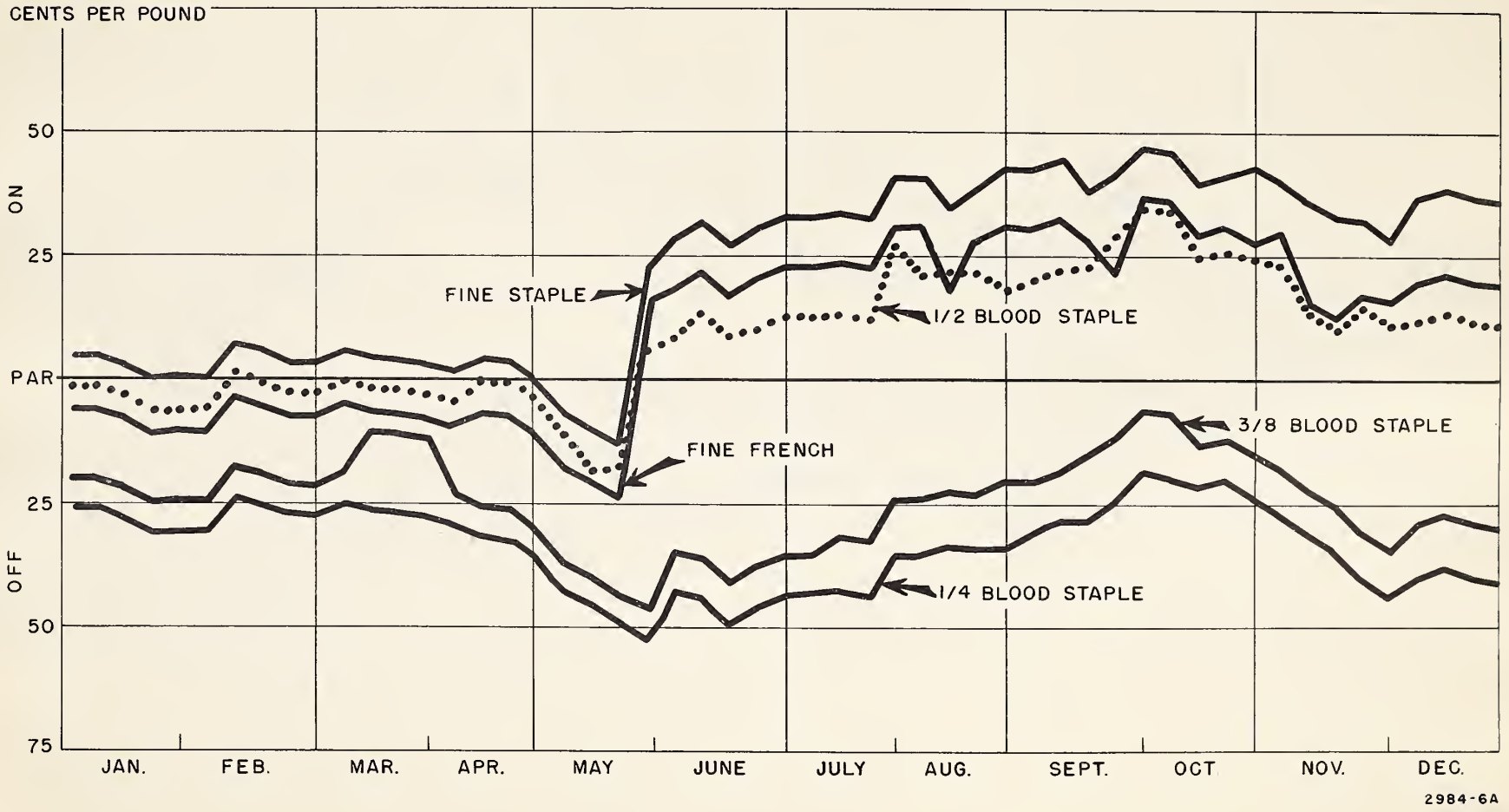


CHART 6b

BASES FOR FIVE GRADES OF TERRITORY WOOL - 1949

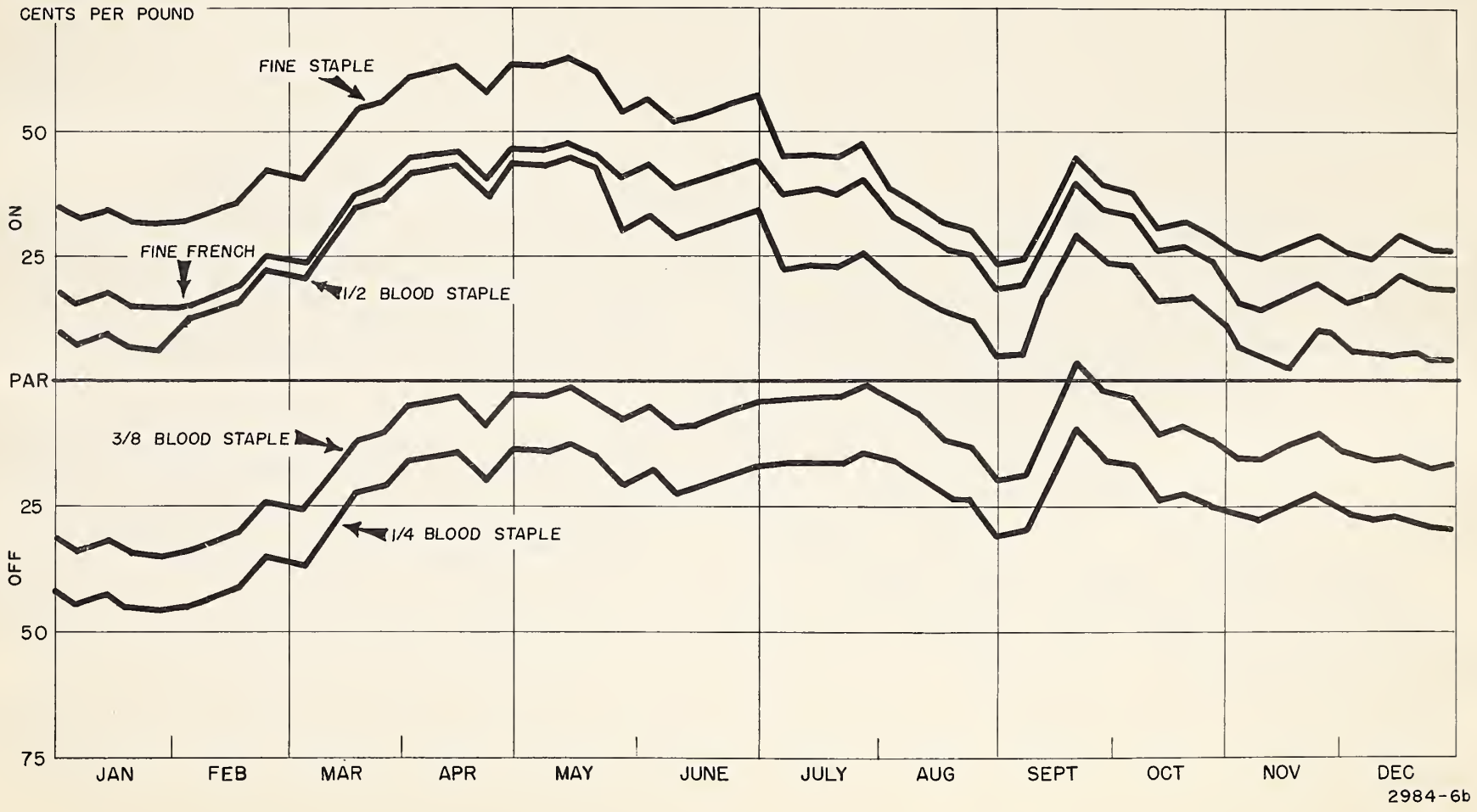


CHART 6c

BASES FOR FIVE GRADES OF TERRITORY WOOL - 1950

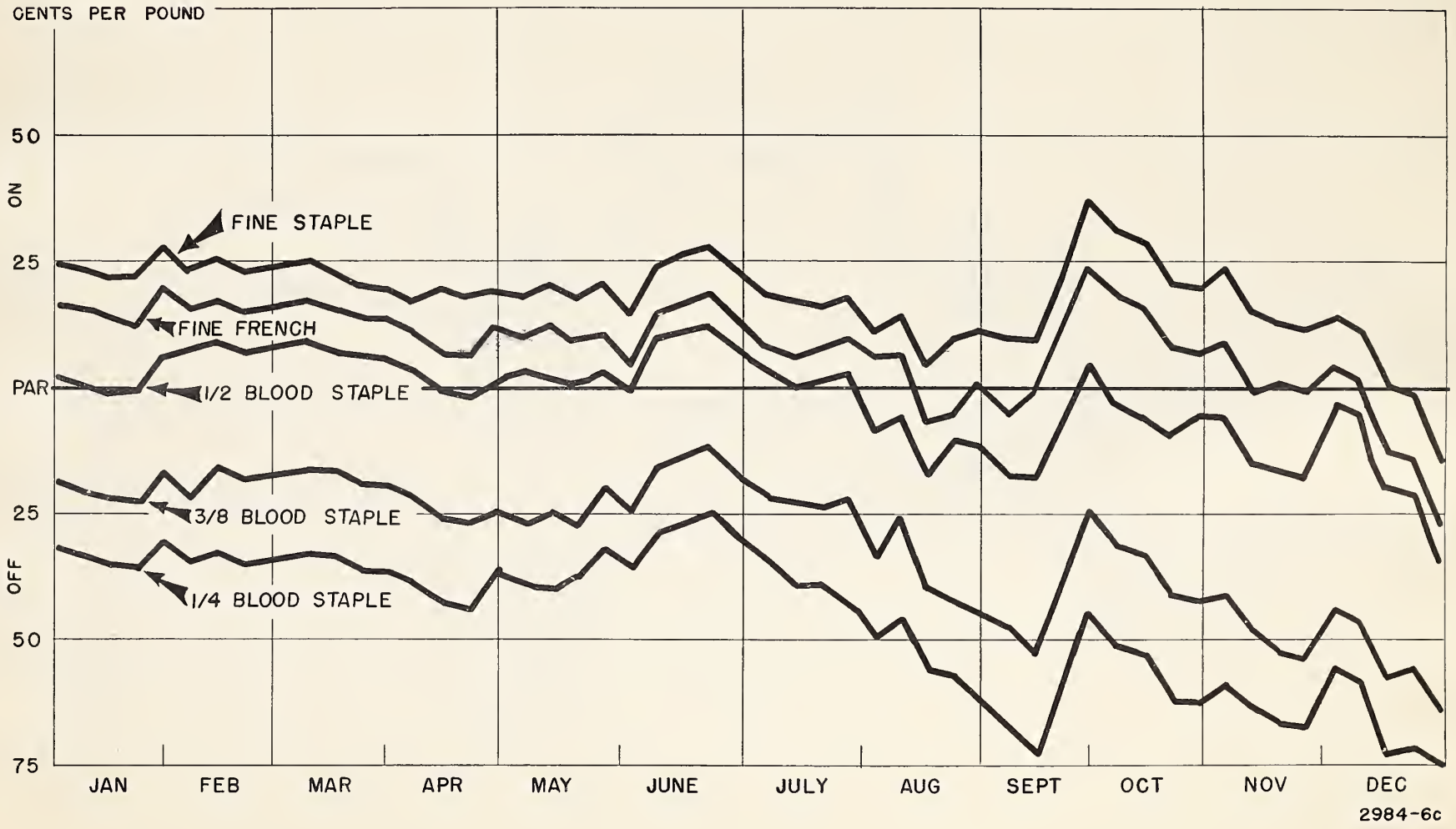


CHART 6d

BASES FOR FIVE GRADES OF TERRITORY WOOL – 1951

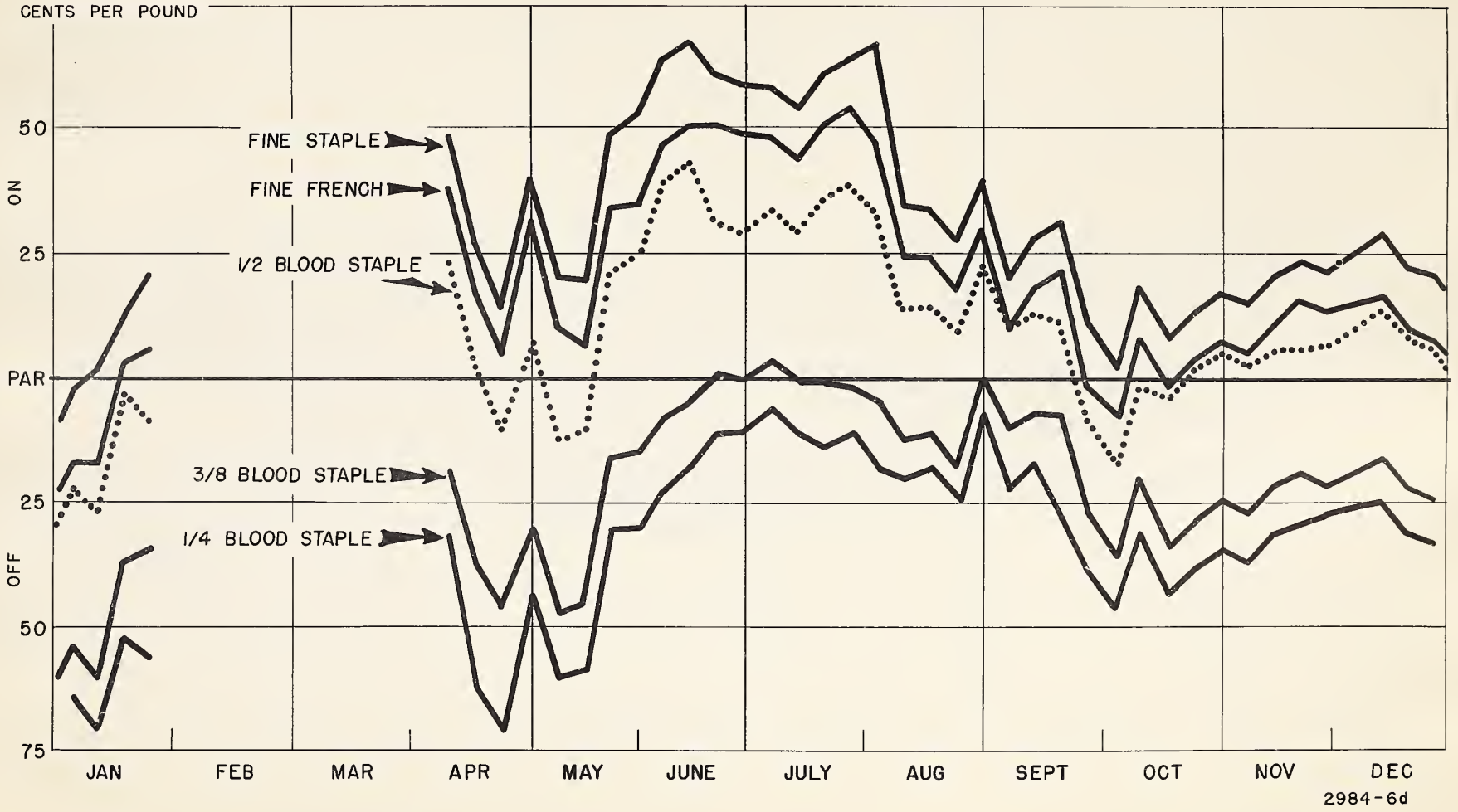


CHART 6E

BASES FOR FIVE GRADES OF TERRITORY WOOL - 1952

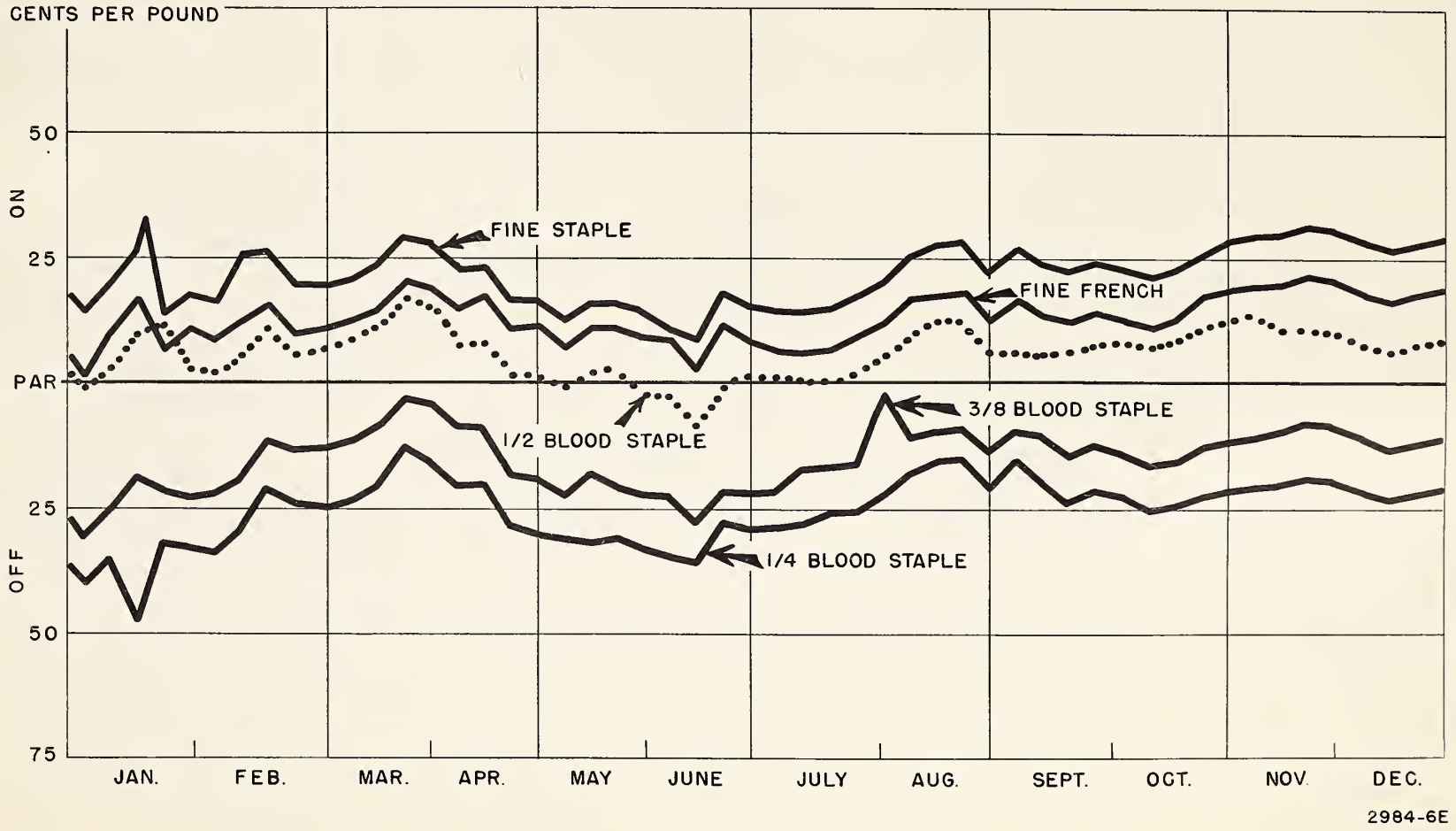


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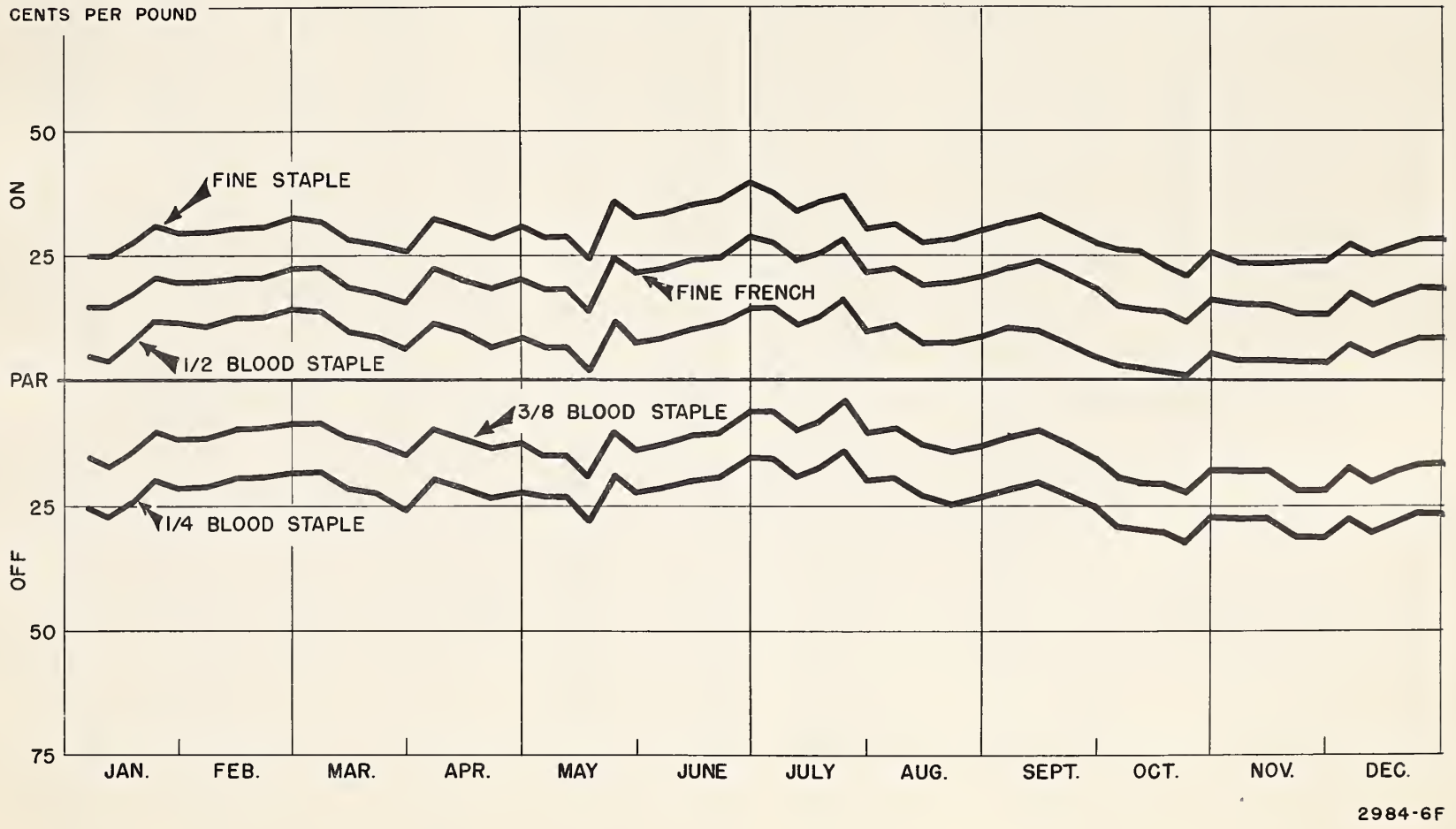
CHART 6F

BASES FOR FIVE GRADES OF TERRITORY WOOL - 1953



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By Grade

Spot prices of the different grades of wool do not fluctuate up and down together in exactly equal amounts. The bases for the different grades, therefore, do not go up and down together in equal amounts. Charts 6A to 6F traced the bases for five grades of Territory wool during 1948-52.

The bases for Territory 3/8 and ¼-Blood combing wools indicate that these grades could have been hedged as well as the deliverable grades if the hedger could have liquidated or covered his futures before the delivery period. In practical operations it is considered desirable for a short hedger to be in position to deliver on the futures contracts if that is more profitable than to cover his futures. Switching a short hedge to more distant futures is usually costly in an inverted market.

Thorough hedgers, if they do decide to deliver, will attempt to deliver the cheapest deliverable grade, premiums and discounts considered. The cheapest deliverable grade is sometimes called the "skin" grade, especially in the grain trade. Futures prices in a broad market tend to correlate most closely with the cheapest deliverable grade. Superior grades sometimes become abnormally high in spot markets relative to futures even in a broad futures market.

There are wide ranges in value and quality within a given grade of wool. The basis line for Fine Staple in Chart 6A, for example, is only an average that might represent clean prices ranging from more than 10 cents below to over 10 cents above this line. The hedger must take into consideration the value of each lot of wool in calculating basis.

The bases for Fleece wools would be similar, but not equal, to those for Territory wools. Medium and coarse Fleece wools generally sell for less than Territory wools of the same fineness.

Chart 5 shows spot prices and bases on current or nearby futures for Fine French Territory wool for 1948-52. Fine French Territory is very near the "par" grade.

SPREAD BETWEEN WOOL AND TOP FUTURES

Wool or tops can be hedged in either wool futures or in top futures. The thorough hedger will choose the future, either tops or wool, in which his chances for making a basis profit are best.

Chart 7 shows the 1949-53 spread between top and wool futures for the nearby months.

Prices of wool and wool top usually move up and down together in broad price movements because the cost of grease wool is the dominant cost in making tops. However, there are also many factors that keep wool and wool top prices from going up and down together in perfect correlation.

Costs of converting wool into tops vary from time to time by such factors as processing costs or fees, and the prices of noils, offsorts and wastes.

Prices for wool and wool tops reflect two somewhat different sets of demand and supply in separate but related markets. Differences in spot prices and futures prices for wool and tops all vary one from the other over a period of time.

Top makers are in good position to measure relative values in terms of wool, tops, wool futures and top futures because of their knowledge of costs and prices. However, as shown in Chart 7, opportunities have existed for others in the wool trade to take basis profits by hedging wool in top futures On the other hand, there have been risks of severe loss from hedging wool in top futures.

It is beyond the scope of this report to go into the complexities of figuring what futures top or wool, offer the best opportunity for hedging grease wool under various conditions. However, this is a subject worthy of careful study.

HEDGING OPERATIONS

In hedging their members' wool, cooperatives may use various types of transactions, such as selling on call, short hedging, long hedging, and shifting their long position from wool to futures.

Selling On Call

Selling "on call" is of potential importance to large-scale wool marketing cooperatives. In the cotton trade cooperatives sell large quantities to their customers "on call". Cotton manufacturers usually purchase a major portion of their requirements in on call transactions. By so doing, the manufacturer avoids having to trade in futures. On-call transactions have not yet become very important in the grease-wool trade. However, selling on call is a rapidly growing practice in merchandising wool tops.

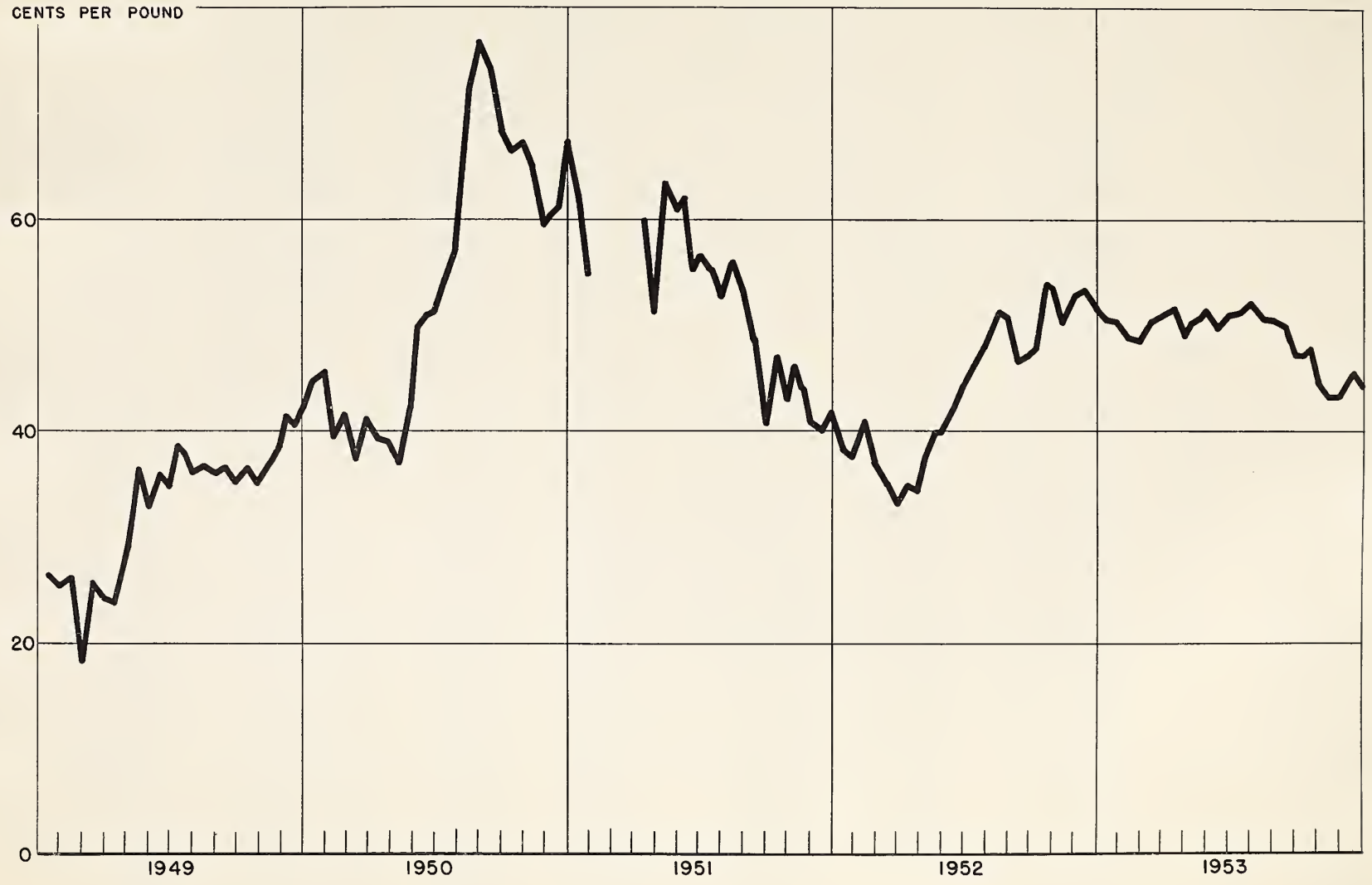
On-call selling involves the selling of the basis at a specified amount above or below that of a designated future or option. If the seller sells futures at the same time he sells the basis in an on-call transaction, he essentially has sold the wool.

If the owner of a 6,000-clean-pound lot sold the basis for 10 cents "on" December wool and concurrently sold the December future for $1.50 -- he would essentially have sold that lot of wool at $1.60 for forward delivery on or before some specified date before the December future could "go off the board", or closed out. The buyer in this assumed on-call transaction would pay for the basis plus or minus the price paid by the on-call seller when he covered his December future when the buyer "called" the sale. In this simplified example the buyer speculated on the basis but not in futures; the seller did not speculate in futures nor did he take a basis risk.

Call sales are not limited to wools in inventory or wools covered by consignment agreements. Call-sales contracts can be executed for wool that is to be purchased at a later date. A long hedger, for example, may sell the basis, buy futures, liquidate his futures when he buys the required wool and concurrently sell futures. He covers his short futures when the buyer calls the sale.

CHART 7

SPREAD BETWEEN WOOL FUTURES AND TOP FUTURES, 1949-53



Call purchases can be made from growers in a manner similar to that whereby manufacturers buy on-call from marketers.

Call transactions for grease wool should be covered by specific detailed contracts which need to be clearly and fully understood by both seller and buyer. Many variations might be included in such contracts including provisions for delivery to the buyer before the sale is called.

Short Hedging

Consigned Wool

The cooperative can hedge consigned wool for consignees while the wool is on the sheep's back, in transit or in storage. The cooperative can hedge wool for an individual member on a brokerage or commission basis or it may hedge wool on a pool basis without specific contracts with the individual growers.

Except in rare instances, cooperative wool marketing associations have done no hedging of consigned wool, although there have been and will be opportunities for cooperatives to hedge consigned wools with beneficial results to producers.

Cooperatives have handled consigned wool separately and distinctly from purchased wool. Growers receive some or all of the following advance loans or payments on consigned wool: (1) pre-shearing advance; (2) commodity advance when wool is received by the cooperative (3) "final payment" after the wool has been sold, and (4) a "patronage refund".

The grower who sells his wool to a cooperative may obtain a pre-shearing advance, a final payment when the wool is delivered to the cooperative, and a patronage refund. The grower who sells to the cooperative usually has membership privileges equal to those of members who consign their wool to the cooperative.

It would be more appropriate to consider that all wool handled by a cooperative for patron growers can be classified in the following two categories: (1) straight consignment with low nonguaranteed advances, and (2) high guaranteed advance pool consignment.

Advances on wool that is to be short hedged in the high guaranteed advance pool should be made low relative to the price of futures. In other words, the cooperative would have to protect itself as much as possible against basis loss when hedging high guaranteed advance consigned wool. The high advance might be considered as being comparable to the purchase price as paid by dealers other than cooperatives.

The advance, in the case of low non-guaranteed advance straight consignments, can be made by the customary procedure without special reference to futures. However, under some conditions, it might be feasible to make higher-than-customary advances on hedged low-advance consignments.

Low-Advance Consignments - Hedging low-advance consignments is most likely to be a procedure of benefit to consignees if the following conditions exist when the hedge is placed; (1) The spot price is above Government loan or purchase levels; (2) forward or spot sales cannot be made at a level higher than the price of the most favorable option plus or minus a high basis; that is, spots are low relative to futures; (3) the volume of the consignment or consignments can be matched or nearly matched with the volume of futures -- that is, 6,000 clean pounds or multiples thereof.

When futures are sold to offset the grower's long position in wool, the gross returns to the grower will equal the price of the future sold plus a basis profit or minus a basis loss, plus a premium for quality better than par or minus a discount for quality below par, minus carrying charges. If the wool is delivered in fulfillment of the short futures contract, the premiums or discounts will be in accordance with the appraisal of WANYCE appraisers.

The growers should understand that they must inevitably take a price risk on their wool. They can carry this price risk for longer or shorter periods of time. They reduce the period by selling wool on the sheep's back, extend the period by keeping their wool in storage or by consigning to the cooperative or other marketer, for sale at some later date.

Selling on the sheep's back, as customarily practiced, has not been a very scientific procedure. Consigning to a professional wool marketing firm allows for selling more nearly according to merit in a graded condition to manufacturers.

Under certain conditions as outlined above, growers might have their cooperative short-hedge their wool to take advantage of favorable price levels and still obtain the benefits of consignment marketing.

When the Government is supporting domestic wool prices through loans or purchases, it might sometimes be possible to make rather large basis profits. Futures tend to reflect the cheapest deliverable grade of wool in the world. Futures prices can thus go considerably below support levels for domestic wool. When this happens and if the grower has sold futures at a favorable high basis to offset his long position in wool when prices were above support levels, he may, after a price decline to below support levels, place his wool under loan or sell it to the Government and cover his short futures. 6/

6/ Following is a hypothetical example of a 30-cent gross basis profit obtained by a cooperative selling short-hedged consigned wool to the Government.

Date		Action			
May 10	Sell March wool at	$1.60	when spot price was		$1.70
	Cover March futures at	$1.20	and sell spots to Government		$1.60
	Profit	$0.40		Loss	$0.10

High-Advance Consignments - Cooperatives can best hedge high guaranteed advance consignments on a pool basis. The operations would be comparable to those of a hedging dealer. Any basis gains or losses would be pooled, and separate futures accounts would not necessarily have to be made for each consignment. One hedge account, similar to that used by hedging cotton or wool dealers, could be used for all high-advance hedged consignments.

The cooperative should protect its interests by making the high guaranteed advances on a low basis and selling the wool on a high basis insofar as feasible. Under many conditions the cooperative might not be able to meet the competition of order buyers or speculative dealers on strictly high-advance pooling operations. However, when a goodly portion of the high-advance wools have been sold forward (including on-call sales), the cooperative might find it feasible to short-hedge those portions not covered by forward-sales contracts.

There is considerable doubt as to whether high guaranteed advance wools would be eligible for loans or purchases in support programs.

Long Hedging

Forward selling has become an established practice with some wool cooperatives. The forward-sales contracts may be fulfilled by delivering either low- or high-advanced or purchased wools. Futures contracts are not necessarily involved if low-advanced wools are to be applied on the forward sales. However, the cooperative is taking a price risk if it is to apply high-advance wools. This price risk exists until the cooperative has accumulated the wool specified in the forward-sales contract. The cooperative might sustain a speculative loss if it does not long-hedge and prices went up before it could obtain the required high-advance wools. When the cooperative long-hedges it takes a basis risk. It is, therefore, important that the cooperative forward-sell on a high basis.

Shifting Long Position from Wool to Futures

The grower who owns wool has a long position in that wool -- he gains as prices rise -- loses as prices decline. The grower with a long position in futures gains as prices of futures rise -- loses as prices of futures decline.

Charts in this report show that wool prices and futures prices do not move up and down together in perfect correlation. Bases have fluctuated up and down rather radically during some periods.

Cooperatives have had opportunities to sell wool on high bases but at prices which were unsatisfactory to consignees. Under such conditions it might be to the consignees' advantage to have the wool sold and take an equally long speculative position in futures.

Costs of carrying wool in storage are generally somewhat higher than for brokerage and other costs of carrying futures.

Examples

Is the basis going higher? Or is it going lower? When? That is the heart of the problem of the hedger, or of the grower thinking about shifting from a long position in wool to a long-speculative position in futures.

The following 16 examples show basis gains or losses from different types of operations. These examples use price data from the "Weekly Wool Trade Report" which is issued by WANYCE. Costs of doing business are not shown.

Example 1.- Simple short hedge with a basis gain

Date	Wool		Futures		Basis
5-18-51	Advance @ ¢3.000	-	Sell July @ $2.935		6.5¢ on
7-20-51	Sell @ $2.450	-	Buy July @ $1.990		46.0 on
	Lose ¢0.550		Gain	¢0.945	¢ 39.5

A high advance of $3.00 is equal to the Boston spot price for graded Fine French Combing Territory, approximately equal to the "par" grade on WANYCE. The high advance would have been less than $3.00 per clean pound to the grower because of freight, handling, storage and other costs. If the wool were in the high advance pool, the 39.5 cent basis gain would be pooled and retained for a number of years by the cooperative. Later, it would be distributed as a patronage refund when so ordered by the board of directors. Basis losses would be taken out of this same pooled account.

If this wool had been marketed as a low-advance straight consignment the grower would have received a gross total of ¢3.395 for his wool ($2.45 from sale on 7-20-51 plus ¢0.945 profit on futures). His net price would have been $3.395 minus handling, freight and other charges. He would receive a patronage refund after a number of years, providing the directors ordered such payments and the cooperative had realized savings from operations during that clip year.

Chart 6D shows that the basis for Fine French Territory wool was low during part of May 1951 and much higher during July 1951.

If the high-advance wool had been delivered in fulfillment of the futures contract on 7-20-51, the cooperative would have received ¢2.935 for the wool on which it had originally advanced somewhat less than ¢3.000. This would amount to a basis loss of 6.5 cents per clean pound on this wool, appraised at par. This 6.5 cent loss would be taken out of the high-advance pool account.

If the cooperative had delivered low-advance wool, in accordance with the example, the consignee's returns would have been ¢2.935 per pound less marketing charges. The ¢2.935 per pound would have been 48.5 cents per pound above the spot market on 7-20-51, which was $2.45; but 6.5 cents less per clean pound than spots on 5-18-51.

It is assumed in Example 1 that there was an exact matching of wool and futures volume.

Example 2.- Simple short hedge with a basis loss

Date	Wool		Futures		Basis
8-3-51	Advance @ $2.450	-	Sell October @ $1.980		47.0 on
10-5-51	Sell @ $1.830	-	Buy October @ $1.910		8.0 off
	Lose $0.620		Gain	$0.070	-55.0

The basis loss of 55 cents per clean pound on par-grade wool is somewhat extreme but is based on published spot and futures price data.

If on 8-3-51 the cooperative had advanced $2.45 less charges to the grower and sold futures at $1.98, and then on 10-5-51 sold the wool at $1.830 and covered futures at $1.910, it would have lost 55 cents per clean pound. The 55 cents per clean pound would be taken from the high-advance pool account if sufficient funds were available.

If the wool had been handled as a low-advance consignment, the grower would have received $1.90 less marketing charges for his wool ($1.83 from sale on 10-5-51 plus 7 cents gained on futures).

Chart 6D shows that the basis for Fine French was much higher in August than in October 1951.

Example 3.- Simple long hedge with a basis gain

Date	Wool		Futures		Basis
3-28-52	Sell forward @ $1.500	-	Buy July @ $1.300		20.0 on
5-23-52	Advance @ $1.570	-	Sell July @ $1.460		11.0 on
	Lose $0.07		Gain	$0.1600	9.0

Par grade wool was forward sold at $1.50 and July wool was bought at $1.30. The cooperative made a high guaranteed advance of $1.570, less marketing charges on the required wool, on May 23, 1952 and liquidated its long futures. The cooperative realized 9 cents per clean pound on this wool for deposit in the high-advance pool account.

If the cooperative had applied low-advance consigned wool on this hedged forward sale as of 5-23-52, the grower could have realized $1.66 less marketing charges for his wool ($1.50 plus 16 cents profit on futures). The reason for the cooperative's having hedged the forward sale on 3-28-52 was that it did not then know whether high- or low-advance consignments would be applied on the forward sale.

There is some doubt as to whether or not it should be cooperative policy to distribute above-market returns on long-hedged forward-sold low-advance consignments soon after the wool is sold. This is a policy-level question for the board of directors to decide on.

Example 4.- Simple long hedge with a basis loss

Date	Wool	Futures	Basis
3-4-49	Sell forward @ $1.140 -	Buy July @ $1.380	24.0 off
6-10-49	Advance @ $1.120 -	Sell July @ $1.211	9.1 off
	Gain $0.020	Lose $0.169	-14.9

The 3/8-Blood Territory Combing wool used in this example is a nondeliverable grade. Chart 6B shows basis changes for 1949. The basis for 3/8-Blood Territory combing had been lower than 24 off for several months before March 4 when the hedged forward sale was made. The cooperative had to obtain the required wool prior to the delivery date specified in the forward sales contract. Time pressure did not allow the cooperative to wait for the basis to go lower before obtaining the high advance wools. The cooperative thus was forced to take a loss. Funds to cover this loss of 14.9 cents per pound would come out of the high-advance pool account.

It is most doubtful whether it would be advisable to apply low-advance wools against the forward sale of this example unless basis gains had previously been made during the same clip year from the same large low-advance pool.

Example 5.- Short hedge switched with a basis gain

Date	Wool	Futures	Basis
5-4-51	Advance @ $2.350	Sell July @ $2.800	45.0 off
6-15-51	-	Buy July @ $2.271	-
6-15-51	-	Sell Dec. @ $2.235	-
9-14-51	Sell @ $1.400	Buy Dec. @ $1.505	10.5 off
	Lose $0.950	Gain $1.259	+30.9

The 1/4 Blood Territory Staple used in this example is a nondeliverable grade on WANYCE. Chart 6D shows that the basis for this grade was low during early May 1951 and relatively high in mid-September 1951.

If the wool in this example were in the high guaranteed-advance category, the grower would have realized somewhat less than $2.350 and the cooperative would have placed 30.9 cents per clean pound in the high-advance pool account.

If the wool in this example were in the low-advance category, the grower would have received $2.659 (2.350 + 30.9 or $1.40 + $1.259) less marketing charges.

The basis for this wool was higher than 10.5 off during parts of July and August. However, it is not always possible to sell wool at reported or quoted market prices. The cooperative switched the short hedge from July to December on June 15. There was a switching loss of 3.6 cents per pound ($2.271 - $2.235).

Short hedgers usually prefer to switch their hedge to a more distant option rather than to make delivery. If the hedged wool is a nondeliverable grade they must switch the hedge or sell the wool and cover their futures.

Example 6.- Short hedge switched with a basis loss

Date		Wool		Futures	Basis
4-4-52	Advance	$1.460 -	Sell July @	$1.295	16.5 on
6-6-52		$1.440 -	Buy July @	$1.466	2.6 off
		$0.020	Lose	$0.171	-19.1
6-6-52		$1.440	Sell Oct. @	$1.426	1.4 on
7-18-52	Sell	$1.510	Buy Oct. @	$1.505	0.5 on
		$0.070	Lose	$0.079	- 0.9
	Gain	$0.050	Lose	$0.250	-20.0

The wool in this example was 1/2-Blood Territory Staple, a deliverable grade with a value of 6 percent below par. Chart 6C traces the basis movements for 1952.

If the cooperative had carried the July futures and made delivery it would have received only $1.217 for the wool, ($1.295 minus 6 percent discount of 7.77 cents) with a loss of 24.3 cents per pound.

The loss of switching from July to October was 4 cents per pound ($1.466 -$1.426)

It is usually, but not always, more profitable to switch a short hedge to a more distant future than to make delivery. The wool futures market would be a more desirable medium for short hedging if it were not inverted.

If high-advance wool were involved in this example, the grower would have received somewhat less than $1.46. The cooperative would have had to cover the 20 cent basis and switching loss by removing funds from the high-advance pool account.

If low-advance wool had been used in this example, the grower would have received $1.26 less marketing charges. ($1.51 less 25 cents lost on futures).

Example 7.- Long hedge switched with a basis gain

Date		Wool		Futures	Basis
3-28-52	Sell forward @	$1.270 -	Buy May @	$1.300	3.0 off
4-18-52		$1.250 -	Sell May @	$1.360	11.0 off
	- - - - - - - - - - - -		Gain	$0.060	
4-18-52		$1.250	Buy July @	$1.340	9.0 off
6-6-52	Advance @	$1.240	Sell July @	$1.466	22.6 off
			Gain	$0.126	
	Gain	$0.030	Gain	$0.186	

A non-deliverable grade, Territory 3/8 Staple, is used in this example. The bases for this example are shown in Chart 6E.

If high-advance wools were used in this example the grower would have received somewhat less than $1.24 for his wool. The gain of 21.6 cents would be deposited in the high-advance pool account.

If low-advance wools were used in this example the grower would receive $1.456 ($1.27 + 18.6 cents profit on futures) less marketing charges, if such were the policy of the cooperative.

Switching a long hedge to a more distant future in an inverted market is not so likely to result in a loss as switching short hedges.

Example 8.- Call sale of short-hedged wool

Date	Actions	
5-20-49	Sell basis @ 65 on Oct. and sell Oct. @	$1.150
8-19-49	Buyer calls and co-op covers Oct. @	$1.215
5-20-49	Gross receipts of co-op ($0.650 + $1.150) =	$1.800
5-20-49	Market price of Fine Staple Territory =	$1.800
8-19-49	Costs to the call buyer ($1.215 + $0.650) =	$1.865
8-19-49	Market price of Fine Staple Territory =	$1.530

The cooperative sold both basis and futures on May 20, 1949, for a total of $1.80. This is the equivalent of selling the wool for a gross of $1.80 for delivery to the call buyer at some later date. The buyer took on the basis risk and the price risk was offset in the futures market.

The call buyer, in this example, made the mistake of buying the basis when it was at a high level.

The cooperative could have remitted $1.80 per clean pound less marketing charges to the consignee on May 20, 1949. The marketing charges would include estimated carrying costs to date of delivery to the buyer.

Example 9.- Call sale of short hedged wool

Date	Actions	
6-13-52	Sell basis @ 21.5 off Oct. and sell Oct. @	$1.465
9-5-52	Buyer calls and co-op covers Oct. @	$1.415
6-13-52	Gross receipts of co-op ($1.465 - $0.215) =	$1.250
6-13-52	Market price for 3/8 Blood Staple Territory =	$1.250
9-5-52	Costs to call buyer ($1.415 - $0.215) =	$1.200
9-5-52	Market price for 3/8 Blood Staple Territory =	$1.320

In this case the call buyer obtained wool on September 5, 1952 at $1.20 when the market price was reported at $1.32. The cooperative was "out of the market" on this wool on June 13, 1952, when it sold the basis at 21.5 off October and the October option at $1.465 for a gross of $1.25.

Example 10.- Forward call sale of short hedged wool

Date	Actions	
4-11-52	Sell basis @ 8.0 off Oct.	
5-2-52	Advance @ $1.21 and sell Oct. @	$1.380
7-25-52	Buyer calls and co-op covers Oct. @	$1.505
5-2-52	Market price of 3/8 Blood Staple Territory =	$1.210
5-2-52	Gross receipts of co-op ($1.425 - $0.125 loss on futures)	$1.300
7-25-52	Costs to call buyer ($1.505 - $0.080) =	$1.425
7-25-52	Market price of 3/8 Blood Staple Territory =	$1.320

The cooperative took the basis risk from April 11, 1952, until May 2, 1952. The co-op was "out of the market" for this wool when a high advance of $1.21 was made on the required wool on May 2, 1952, and the October option was sold at $1.380. The cooperative was thus assured a basis gain of 9 cents per clean pound ($1.38 - $0.08 = $1.30, which is 9 cents over the high advance of $1.21). The cooperative would actually have advanced less than $1.21 so that its costs of doing business would be covered.

The cooperative could have remitted $1.30 less marketing charges to the consignee on 5-2-52 if low-advance wools were applied on this forward call sold short-hedged wool. However, the wisdom of remitting such proceeds at above-market levels is doubtful, especially after the cooperative has borne the basis risk from 4-11-52 until 5-2-52.

Example 11.- Comparison of wool futures and top futures as alternative media for short hedging

Date	Wool	Wool futures	Top futures	Basis Wool	Basis Tops
6-13-52	Advance @ $1.550	Sell Oct. @ $1.465	or @ $1.885	8.5 on	33.5 off
8-22-52	Sell @ $1.590	Buy Oct. @ $1.410	or @ $1.932	18.0 on	34.2 off
				∠ 9.5	∠ 0.7

Fine French Territory is used in this example. The basis gain in wool futures was 8.8 cents (9.5 -0.7) per clean pound greater than for top futures

Example 12.- Comparison of wool futures and top futures as alternative media for long hedging

Date	Wool	Wool futures	Top futures	Basis Wool	Basis Tops
3-21-52	Sell forward @ $1.160	Buy July @ $1.340	or @ $1.705	18.0 off	54.5 of
6-6-52	Buy @ $1.120	Sell July @ $1.446	or @ $1.885	34.6 "	76.5 "
				∠ 16.6	∠ 22.0

In this example 1/4-Blood Staple Territory is used. The basis gain in top futures was 5.4 cents (22.0 -16.6) per clean pound greater than for wool futures.

Example 13.- Comparison of different wool options as alternative media for short hedging

Date	Wool	Futures	Basis July	Basis October
5-16-52	Advance @ $1.480	Sell July @ $1.460 or Oct. @ $1.422	2.0 on	5.8 on
6-6-52	Sell @ $1.440	Buy July @ $1.466 or Oct. @ $1.426	2.6 off	1.4 on
			-4.0	-4.6

In this example 1/2 Blood Staple Territory is used. The basis loss in July wool was 0.6 cents less than for the October contract. If the cooperative had wanted to switch from July to October, it would have incurred a switching loss.

Example 14.- Comparison of different wool options as alternative media for long hedging

Date	Wool	Futures	Basis May	Basis October
2-1-52	Sell forward @ $1.800	Buy May @ $1.590 or Oct. @ $1.560	21.0 on	24.0 on
4-11-52	Advance @ $1.570	Sell May @ $1.346 or Oct. @ $1.312	22.4 on	25.8 on
			- 1.4	- 1.8

Fine Staple Territory is used in this example. The cooperative would have found October wool less favorable than the May wool option.

Example 15.- Long position more favorable in futures than in wool

Date	Wool	Futures	Basis
9-7-51	Sell @ $1.750	Buy May @ $1.533	21.7 on
3-28-52	(market price $1.470)	Sell May @ $1.300	17.0 on
	-$0.280	-$0.233	- 4.7

In this example 1/2 Blood Staple Territory is used. The consignee, in this example, would have sustained a loss either by holding his wool off the market or by taking a long position in futures. However, the long position in futures was somewhat (4.7 cents gross) more favorable than a long position in wool.

If we assume that 50 bags of wool containing 6,000 clean pounds were involved, and that carrying costs were 30 cents per bag per month, the following figures could apply:-

Carrying costs on 50 bags, 6 months @ 30 cents per bag-month	= $90.00
Round-turn brokerage commission on 1 wool contract	= $40.00
Difference	= $50.00
6,000 pounds x $0.047	= $282.00
Total	$332.00

Example 16.- Long position more favorable in wool than in futures

Date	Wool	Futures	Basis
3-4-49 Sell @	$1.140	Buy July @ $1.380	24.0 off
6-24-49 (market price	$1.120)	Sell July@ $1.195	7.5 off
	+ $0.120	-$0.185	- 16.5

In this example 3/8-Blood Staple Territory wool is used. The consignee's gross returns were 95.5 cents ($1.140 -$0.185) per clean pound. Futures dropped 18.5 cents while the market price for 3/8-Staple Territory dropped only 2 cents per clean pound.

QUALIFIED PERSONNEL AND ORGANIZATION

Procurement, pricing and merchandising functions of a large-scale wool-marketing cooperative make up the heart of the business enterprise. Effective and efficient planning, organizing, budgeting, staffing, directing, coordinating, appraising, and standardizing of these services are difficult. The sales manager, fieldmen, field managers, appraisers and salesmen are directly involved in procurement, pricing and sales. Nearly all other employees are also involved in this work in varying capacities.

Trading in futures can become complex and involved for a wool marketing cooperative. The technical problems involved in hedging and futures trading are largely in the field of pricing. One of the sales manager's primary functions is to be "on top of" the price situation at all times.

The decision when and how to use the futures market must be based on knowledge and business judgment. Part of the requisite knowledge can be obtained through study of books, publications, market news reports, and analyses and by interviewing persons expert in this field. Such knowledge should be supplemented by practical experience in the "school of hard knocks"

Few employees of wool cooperatives have much knowledge or experience in wool and top futures trading. Therefore, present employees will require training before extensive futures trading operations can be effective and efficient. Employing a qualified and experienced man in wool and top futures trading, with knowledge of spot-wool trading, also might be desirable This person could be helpful in training salesmen-appraisers, field managers, and fieldmen in futures trading operations.